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ABSTRACT

Based on interviews with State Education Department personnel, this report presents information regarding the status of rural education in the seven-state region (Colorado, Kansas, Missouri, Nebraska, North Dakota, South Dakota, and Wyoming) served by the Mid-Continent Regional Laboratory. Of the 2,400 school districts in this region, 93 percent fit the federal definition of rural, enrolling 2,500 or fewer students. Seventy percent of the districts enroll fewer than 500 students; 51 percent enroll fewer than 250 students and 31% enroll 100 or fewer students K-12. The major challenge to rural education is to expand the range of options for addressing the rural small school problem without further consolidation. The first section of the report reviews state educational policies affecting rural education. It describes each state's policy on rural school finance, transportation, teacher supply, accreditation standards, school consolidation, improvement, facility building, rural school interests, and new initiatives. The second section focuses on rural school improvement efforts, including improvement of personnel, statewide administrative changes, financial support, school personnel, and special programs at school level. Section 3 profiles each state's social and economic environment, its schools and its students, based on a synthesization of statistical data at state, regional, and national levels. The final sections describe the datasets and their limitations and plans for further information management and development. The appendix contains 12 maps on the region's school demography. (ALL)

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PROFILES ON RURAL EDUCATION IN THE SEVEN STATE MID-CONTINENT REGION

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PROFILES ON RURAL EDUCATION IN THE SEVEN STATE MID-CONTINENT REGION

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INTRODUCTION

This report presents information regarding the status of rural education in the seven state Mid-continent region. Following this introduction and overview is a section that summarizes state educational policies affecting rural education including school improvement efforts. After the policy section, the report includes profiles of each state's social and economic environment, its schools and its students. Lastly, there is a brief section that describes the state, regional and national datasets that were organized for this project, some limitations of the data, and plans for further development. Appendices include county level maps of key indicators, state summary tables by metropolitan and nonmetropolitan areas, and a set of twenty tables with over 140 variables at the county level for each state.

Although a great deal of information has been compiled, in many respects this effort is incomplete. There are several data elements for various states that remain missing or dated and much more analysis and interpretation is warranted. Plans have been made to engage representatives from each state in an assessment of the available data and development of more complete databases and analysis.

A fundamental aspect of rural America and rural education is its diversity. A review of the educational policies section or the population indicators quickly reveals diversity both between states and between different regions within states. For example, in Missouri the patterns of population growth and school enrollment are quite different in the Bootheel Region, the metropolitan fringe areas and the lake regions in the Southwestern part of the state. This local diversity is why we have focused on information at the county level even though it is sometimes a bit out of date or incomplete. A review of the tables in the appendices highlights the differences between counties within states.

The overview below highlights the status of rural education in the region.

OVERVIEW: THE STATUS OF RURAL EDUCATION IN THE McREL REGION

Of the approximate 2,400 school districts in the McREL region, 93% fit the Federal definition of rural, enrolling 2,500 students or fewer. Nebraska and North Dakota have the highest percentage with 98% and 97% respectively. Those with the lowest percent of rural schools by this definition are Colorado and Wyoming at 80% and 81%. More significant, is the fact that the majority of districts are also small. Seventy percent of the districts enroll fewer than 500 students; just over half (51%) of the districts enroll fewer than 250 students and 31% enroll 100 or fewer students K-12. Conventional wisdom says that a high school in our "one-best-system" of education should enroll a minimum of 400 students in order to offer a comprehensive program in a cost effective way. There are virtually hundreds of communities that are served by high schools for whom this model of schooling is inappropriate.

The point at which small size is considered to be a problem varies from one state to the next. In the name of more efficient and effective education, Nebraska continues to try and find ways of getting the approximately 500 elementary districts, approximately half of which enroll fewer than 30 students, to merge with a K-12 system. South Dakota considers high schools of fewer than 35 students to be undesirable and therefore if a district falls below that number for more than

two years, they no longer receive state aid. North Dakota, while having no minimum size standards, requires that all accreditation standards be met for full state funding.

As a counterpoint to the rural schools, each of the states has its metropolitan areas: Denver and the other front range cities in Colorado, St. Louis and Kansas City in Missouri, Omaha and Lincoln in Nebraska. And while Bismarck and Sioux Falls would not be seen as major cities in the larger scheme of things, they represent "large" districts in those particular states. With this dichotomy, a major issue in each of the states focuses on how the dollars available for the support of schools gets divided among the districts of different size, particularly when most of the states in the region are still heavily dependent on property tax for school revenue. How does one achieve equity when the vast majority of students attend the relatively few urban districts, but when the majority of districts, because of sparsity of population, serve small numbers of students. States in the region address this issue in very different ways with some states making no provision for size and isolation. Colorado is unique in that it takes into account eight different categories of school contexts to determine funding.

Currently there are no systematic attempts across the region to look at rural school quality issues. Where standardized test scores are available, rural students appear to perform as well as their urban counterparts. In general, drop-out rates are lower in rural areas than in urban, the exceptions being in the minority pockets, e.g. Indian reservations, the Bootheel of Missouri which is high percentage Black and the San Luis Valley with its Hispanic population. College going rates, according to statistics in Missouri, are more directly related to the proximity of the student to an institution of higher education than to the size of school attended.

The major challenge for those concerned about rural education in the McREL region is to expand the range of options for addressing the rural small school problem. The traditional solution, further school consolidation, is a solution whose time has passed. While useful in those instances where elementary districts could be merged with K-12's, and in a few small districts where sparsity of population is not too great, students can only be bused so far. An hour or more on the bus each way is already a fact of life for many students. Given alternative organizational patterns and the advances in technology, small size need not be the determining factor in achieving access to quality school programs. Furthermore, there is a growing recognition that schools are an important component of rural development. Thus, finding ways to strengthen rural schools serves not only to address the equal access issue, but the revitalization of rural American as well.

REVIEW OF STATE EDUCATIONAL POLICIES AFFECTING RURAL EDUCATION

In order to build a profile of state educational policies among the seven states in the Mid-continent region, focused interviews were conducted among informed state personnel. A set of nine basic questions was posed regarding school finances, transportation, teacher supply, accreditation, school consolidation, school improvement, facilities support, the articulation of rural interests and other new state policy initiatives that might affect rural education. In addition, informants were asked to indicate the extent to which their states were undertaking school improvement or reform initiatives. A list of policy elements common to school reform efforts across the country was gleaned from the literature and used to prompt discussion among the informants. Responses to the nine basic questions are summarized below. The next section after that reviews school improvement initiatives for each state.

SUMMARY OF STATE POLICY INTERVIEWS WITH REGIONAL KEY INFORMANTS

The following are interview responses from persons in state education agencies in the seven state McREL region. The goal in each interview was to obtain information and elicit opinions on issues affecting public school education in rural areas of the respondent's state. Each official responded to the same set of nine questions. These composites reflect as accurately as possible the opinions expressed by the agency personnel.

1. **Does your school finance formula take into account school size and/or isolation? How?**

   In Wyoming, one-teacher schools receive a doubling of funding factors. Also, schools outside a city limit receive more funding.

   In Kansas, school size or isolation are not factors in the school finance formulation.

   In Missouri, the school finance formula does not take school size into account. It is based on several other factors.

   North Dakota provides extra school funding for smaller districts. There is no additional funding for distance within the district.

   Nebraska does not address school size or isolation in the finance formula. Funding is based on ability to pay, among other factors.

   In Colorado, both school size and relative isolation are considered in the funding formula. The formula structures eight increments running from urban to isolated rural. The isolated rural districts, for example, receive more state funding per student than do urban districts.

South Dakota recognizes what are called rural attendance centers--schools with one or two teachers. The state provides extra funding for districts with more than two rural attendance centers. As enrollments increase, the state funding formula requires more students to constitute a classroom unit, recognizing economies of scale. This formula is four or five years old and is currently under review.

2. **How are school transportation costs reimbursed?**

In Wyoming, the state reimburses 80 percent of bus purchase price to the district. If a student is isolated (i.e. the only school-age child in a section of the district) the state reimburses the child's family for transporting the student to school.

In Kansas, state reimbursement to the district is by length of trip. The formula includes average miles per student.

Missouri's reimbursement plan is based on an efficiency factor. There is a state average cost per-pupil-mile. If the local rate is not more than 20 percent above the average cost, the district receives full funding. If efficiency is lower, the rate of reimbursement is also reduced.

In North Dakota, reimbursement is based on per-pupil-mile and other factors such as size of bus. The larger the bus, the less the funding for that factor, since larger busses can carry more students.

In Nebraska, some transport costs are reimbursed by law. Over time, the burden has shifted primarily to the local districts.

Colorado reimburses transport costs by the mile, with an excessive cost factor available for particular circumstances.

In South Dakota, there is no separate reimbursement formula for rural districts. Transportation costs are considered part of the total costs of an education program. State aid is based on local effort and recognition of local cost factors.

3. **Do small rural schools report problems with teacher supply and demand? Do the small rural schools have difficulty in meeting standards for numbers or types of certified personnel?**

Wyoming has not experienced any great difficulty with the supply of teachers, although problems occasionally occur in isolated districts. Accessibility is a concern for some districts during the bitter winter months. There are interactive hookups that expand a curriculum if there are supply problems. There is no shortage of basic teachers, however there is some supply problem for specialists like elementary guidance or special education.

In Kansas, rural schools do not report excessive supply problems. They manage to find teachers, but it is more difficult for them than for urban districts. For the state as a whole, elementary school counselors, library media personnel, and special education personnel are hard to find.

In Missouri, rural districts have not reported significantly greater supply problems than other districts statewide. There is some difficulty everywhere in finding elementary guidance and special education personnel. There may be a serious problem where there are only half-time appointments available. The state minimum salary program has helped alleviate the supply problem for poorer districts.

North Dakota schools have experienced supply problems in unique areas such as special education, music, and K-12 guidance. Rural districts have less diversified curricula and the teachers may need broader preparation. Because of this, and other reasons, teachers tend to move on to larger systems as positions there become available. Rural communities generally hire graduates of the regional teachers' colleges.

In Nebraska, there is some supply problem with math and science teachers, but the shortage is not confined to rural districts.

In Colorado, no rural districts have reported specific supply problems. There are some problems statewide in attracting special education, math, science, and some music teachers.

In South Dakota elementary schools, there are difficulties attracting and holding specialists such as music teachers, and math and science teachers. Principals are in short supply, too. The supply of elementary teachers is currently adequate but may become a concern. At the secondary level, small schools have difficulty offering programming in some areas, especially for gifted students. There is voluntary reorganization by vote of the districts involved, and the state offers dollar incentives to get this accomplished. This is an option for districts that want to enrich their offerings. The number of districts will decrease from 189 to 187 next year based on completed voluntary reorganizations.

4. **Do small rural schools report difficulties in meeting existing state accreditation standards? Are accreditation standards used as a vehicle for closing schools?**

In Wyoming, rural schools have experienced some problems meeting standards in foreign language and elementary guidance. The state has engaged in distance learning projects and interactive TV. TI-IN, out of Texas, offers 60 different courses. Accreditation standards are not used to close schools or prompt reorganization.

In Kansas, the problem of meeting accreditation standards is not peculiar to rural schools. This is the first year all districts are required to offer two consecutive years of a foreign language. Several districts had not offered any foreign language before this year. Accreditation standards are not used to force closings.

In Missouri, some rural districts do have difficulties of this sort. It depends upon which accreditation standard is being considered. The supply of auxiliary personnel such as elementary counselors and librarians, and deficits such as number of volumes in the library, are areas where problems may occur.

North Dakota has experienced a problem at the elementary level in getting instructional leadership integrated with the role of principal. Elementary guidance is also a problem area. Guidance is less a source of concern at the secondary level. Often the vocational counselor can also serve as a regular counselor. Other shortages creating problems are in library services and foreign language.

In Nebraska, there are changes now being made in the state accreditation "chapter". Some complaints are being heard as a result of updating the chapter.

In Colorado, no difficulties have been reported, at least not to any extent. The districts are audited every three years on site, so problems meeting standards would be addressed in a timely fashion.

Some small South Dakota districts have difficulty meeting accreditation standards. Students are sent to neighboring districts for particular coursework, such as foreign language.

5. **Are there currently any policy initiatives to consolidate schools? If yes, where are they coming from? Do you think they will be successful?**

In Wyoming, there is always discussion on consolidation, but there is nothing formal. Satellite TV has helped forestall consolidation. The only real question on consolidation is finance. If the district cannot pay for the school anymore, then there will be consolidation.

In Kansas, there are no such initiatives.

In Missouri, there is no movement for more consolidation. Any initiative would have to come from local districts.

North Dakota is currently undergoing a period of consolidation. Legislative HB 1507 encourages restructuring and reorganization. There is a one-year planning process that is partially state funded. During a subsequent three-year restructuring period, the districts involved become a consortium of independent districts. There is incentive money on a per-pupil basis during this time. Following restructuring, there is a formal vote to approve the reorganization in the district. After reorganization, there is a two-year financial incentive period for the district to move to a more sophisticated standard. The process is drawn out but specific. About 15 districts have expressed interest.

In Nebraska, consolidation is continuing. The motivation is financial. Adjoining districts might tax similar parcels of property differently. There is resistance to reorganizing because of favorable tax situations, but some school districts can't afford to stay open. Five years ago, there were over 900 districts; now there are 800+, 500 of which are elementary-only districts.

Colorado has gone from 181 to 176 districts at local initiative during the last three years. The legislature mandated a study of school organization and staffing patterns. The aim was to look for efficiency and economy. There has been an increased use of shared services by the districts. Boards of cooperative educational services have been established for and by the districts.

In South Dakota, consolidation was accomplished on a large scale 20 years ago.

6. **Are efforts currently underway to help small rural schools meet demands for improved instruction, such as technology initiatives, intermediate service agencies, provisions for inter-district sharing of resources or students?**

In Wyoming, at the local level, there are interactive TV, satellite TV, video tapes, and computer networks. Under law and agency regulation, there is alternative course delivery and long distance learning. There is at least one instance of inter-district sharing of teachers of foreign language.

In Kansas, services are provided in this fashion long-term, especially for special education. Co-ops around the state provide special education expertise to districts. Service centers offer staff development and cooperative purchasing. The state department promotes interactive two-way TV, and there are grants for major projects.

Missouri's effort in this area is on a local as well as statewide basis. For example, there is a video support grant available from the state. It is a one-time, 10 percent match grant of $6,000 to a district to set up on-line access with video equipment. This is for on-line activity only. Tape purchases are not supported. The funds for this grant come from sales taxes on rental of video tapes. Other initiatives include formation of special districts of schools or cooperatives of shared services for professional development and special service functions.

North Dakota provides technological coordination service from agency staff. There is use of technology to alleviated shortages in service or curriculum areas. A Star Schools program is in operation.

Nebraska has educational service units independent of the department in a sense. They have their own boards and taxing power, and they address issues such as curriculum and professional development. There is much inter-district sharing of curriculum development resources in the form of consultants or speakers.

In Colorado, there are technological initiatives. Efforts are made by groups of districts to share services. All small rural districts cooperate this way. They share curriculum specialists, telecommunication networks, technical networks, closed circuit TV, and foreign language instruction.

South Dakota had six sites with telecommunications from TI-IN in Texas. Now there are three such sites. Inservice and instruction are provided. Two sites are in the largest population center. The third site is rural. All are pleased with the quality of the service and its offerings. It takes real commitment on the part of superintendents and principals because the district must meet the telecommunications schedule. It is an economical improvement, overall.

7. **Are there efforts on the part of the state education agency to help small rural schools address issues of facilities and environmental safety, e.g., asbestos removal, solid or hazardous waste disposal, school bus safety?**

In Wyoming, the initiatives in the rural districts are no different than those in the urban districts. The problems of asbestos, for example, have been moved to the legislature because of funding problems. In many districts, maintenance funding has been diverted to current operations. Thus, no extra money is available to address these issues.

Kansas received a $500,000 federal grant for facilities safety. Funds can be used by any district in the state. The small rural districts have benefitted. More commonly, technical assistance is given by the state department. School bus safety is an example of this procedure; the agency offers consultation and technical assistance.

In Missouri the agency staff will provide support and technical assistance. Funds for these activities typically come from federal matching grants.

In North Dakota, school facility safety is the concern of the health department. Districts make application with federal agencies for things like asbestos removal. The state education agency provides technical assistance. No other special state money is available, though local money can be levied for special needs.

Nebraska addresses these issues on a statewide basis. There is no special emphasis on rural districts.

Colorado has provided assistance through the boards of cooperative service on asbestos issues. Other assistance has been mainly through consultation with the state agency. On hazardous waste, there have been no federal funds received yet, and assistance is consultative.

In South Dakota, there is no state funding for asbestos removal. They give technical assistance through the state agency. There are federal grants available to assist in cleanup efforts for asbestos. There is bus driver safety training at the district level with state technical assistance.

8. **Who speaks for rural school interests in your state, and how effective are they?**

In Wyoming, no special groups speak for rural school interests. The legislature is driven by economic interests rather than urban versus rural interests. The state does have a tradition of local control. In 1969, there was a massive reorganization from about 240 school districts to 49. There are thus urban and rural interests in the same legislative district and school

districts. The system favors the more populous centers. There is an effort toward, but no success in, "subdistricting;" that is, gerrymandering districts to reflect separate rural and urban interests.

In Kansas, the Schools for Quality Education, and a rural education initiative out of Kansas State University serve as convenors of forums. Less formal sources are State Board members from rural areas.

In Missouri, the Missouri Association of Rural Educators speaks for rural interests. There are also regional co-ops that address issues affecting local areas.

North Dakota organizations of school administrators and school boards attempt to address rural school interests. The North Dakota Small Organized Schools (SOS) represents 75-80 districts. It has a unique agenda. It believes largeness does not address specific problems. Thus, their emphasis is on small school issues. State education regulations tend to be based on size of district, so their voice could be important.

The Nebraska Rural Community School Association addresses rural education issues. It has placed an emphasis on legislation.

The Colorado Association of Rural Education, the Office of Rural Education at Colorado State University, the Department of Education office of field services and rural coordinators, and the seventeen Boards of Cooperative Services all speak for rural school interests. The regional coordinators and cooperative directors have been especially effective voices.

In South Dakota, the SDEA speaks on behalf of the teachers. There is also an Associated School Boards organization and an administrators organization. A new organization began a year ago among the large school districts. The small school districts are now organizing a similar group; it is in the development stage. This is in response to the initiative of the large districts. These organizations compete, or will compete, for funds, and will monitor legislation and the governor's priorities. They are not perceived to be very effective at this time.

9. **What are the major policy or legislative initiatives currently receiving attention in your state?**

The big issue in Wyoming is school finance. The equity question is also part of this. The issue has been through the state supreme court. There is a recapture system where any district that does not raise enough funds to achieve a state average per- classroom-unit of funding is eligible to receive state aid to achieve that level. Other districts with better resources can only keep 109 percent of the state average per- classroom-unit; the balance is returned to the state for redistribution. Only three districts are in this class; several are in a gray area of receiving no support funding and paying none.

In Kansas, the state board is seeking funding of a school district equalization measure. It is also imploring the legislature to provide categorical funding for at-risk student programs. Other areas of activity are educational excellence and technological innovation. Parents As Teachers is beginning in the state and there are high hopes for its success. The governor has begun

"choice" discussions, but there is no strong support for this initiative. Outcomes-based accreditation is still in the discussion stage. At this point, most funding is allocated to on-going programs, but there are other state board initiatives, including strategic directions for education or restructuring. There is no money for this, but there is discussion. The board has authorized a math improvement program and has sought funding.

In Missouri, money in the school foundation program is a big issue. The state education agency is working on a new version of the foundation formula. Choice of school in rural areas is a problem, due to distances and lack of programs readily available. Federal reallocation of funds for some vocational education programs may occur. This would force affected programs to seek alternative funding. The governor's emphasis remains accountability. A new School Improvement Program, now in a pilot stage, includes outcome indicators and is an attempt at a major overhaul of the over twenty year old school classification and accreditation program.

In North Dakota, there once were specific programs to address rural issues, but they have lapsed. One new initiative is that any high school not accredited by July 1, 1991, will lose all ratio adjustments in funding. Each year thereafter the school remains unaccredited, it will lose $200 per-pupil in state aid.

For Nebraska, school finance is the big issue this year. Last year, a freedom-of-choice law was passed. This year, it is back for changes; it was heavily amended in passage last year.

In Colorado, outcome-based education, schools of choice (where students may theoretically attend anywhere), and state efforts to reward excellent schools (measured by how the district measures expectations) are initiatives receiving attention.

In South Dakota, carrying over from last year the dropout problem is a major focus for the governor. Finance is number two. Another concern is that, while South Dakota students may come to school with a good background for schooling, they may not improve markedly as a result of schooling. The effective schools programs are now being considered as a part of a school improvement program. This is in a development stage.

STATE SCHOOL IMPROVEMENT AND SCHOOL REFORM INITIATIVES

This section provides summaries of respondent commentary regarding four broad areas which, according to a review of the educational literature, have been the focus of much school reform activity. As outlined below, two dozen specific issues were identified within these four areas.

School Reform Policies Issues

Improvement of Personnel
- Teacher education programs
- Beginning teacher programs
- Administrator training programs

Statewide Changes in Structure
- School consolidation
- Alternative certification programs
- School accreditation programs
- Curriculum requirements

Financial Support for Personnel
- Scholarships for teacher education
- Minimum salary programs
- Tuition reimbursement programs for teachers
- Incentive pay
- Career ladders

School Level Programs
- Parental involvement programs
- Extended school day/year
- School entry age policies
- Early childhood education programs
- Parent education programs (Parents As Teachers)
- Dropout prevention programs
- School climate programs/school discipline policies
- Higher-order thinking skills programs
- Tracking or elimination of tracking
- Academic achievement testing
- Subject-specific incentive programs (e.g. science education)
- Linking education and economic development

Responses from each state are presented below. These comments reflect those issues from the list above that the state respondent felt were significant in their state.

COLORADO

IMPROVEMENT OF PERSONNEL

There is a probationary period of three years for beginning teachers. There is also a Colorado Principals' Center operated by the University of Colorado and the state agency. And, there is a statewide training program on teacher evaluation.

State accreditation is totally outcome-based. There are no set inputs, and some emphasis is placed on education processes. Fifteen percent of the small rural schools are North Central approved. There are reviews to improve curriculum and governance, for example.

SCHOOL-LEVEL PROGRAMS

Local districts may establish foundations for teacher education. The prospective teacher must agree to teach in the district 3-4 years after graduation in return for the foundation support.

A few districts have incentive pay programs. Twenty or thirty have merit pay or other programs similar to career ladder.

Every school in Colorado is required to have a parent advisory committee. The committees are composed of students, parents, and patrons who are not parents. A business person is also required on the committee. The committees are goal directed. One recent innovation has been the "guaranteed diploma". If a student is found by his employer to be wanting in the minimum skills the district says he must have to graduate, the employer can send him back to be tutored at public expense.

The school year is based on 1,080 hours, 1,056 for emergency situations. Twenty percent of the districts are on an extended day 4-day week. Seventy percent have shortened the school year in some fashion by extending the day. Twenty-five percent of the districts go 180 days. There is state funded early childhood education. There are pilot preschools for 3-4 year olds; one-fifth of the districts have these preschools.

Parent education is coordinated by school district accountability committees. There are joint ventures such as a STEP program for agriculture co-ops.

Dropout prevention centers around American Indians and Hispanics. There are Second Chance schools where the dropout can come back to finish school. This includes rural districts.

The state agency discourages tracking. There are no set standards. Special attention is paid to the tracking of girls and Hispanics, but on a local basis.

On linking education and economic development, there is an emphasis on economic development. A Governor's committee considers partnerships between business and education. This has served to give education good visibility in the state.

KANSAS

IMPROVEMENT OF PERSONNEL

A beginning teachers program had state funding, but was not refunded this year.

STATEWIDE CHANGES IN STRUCTURE

There is an alternative certification program, but not in the same sense as New Jersey's. Kansas State University has a program for those with a college degree but no teacher preparation. The participants must meet the same requirements as other teachers.

Accreditation related to outcomes is just starting but appears to have strong support.

FINANCIAL SUPPORT FOR PERSONNEL

One district is experimenting with incentive pay.

SCHOOL-LEVEL PROGRAMS

There are parent advisory committees for Chapter One and migrant education.

The extended day/year plan is 180 days a year, six hours a day, or a total 1,080 hours a year.

Early childhood education is not state mandated. A handicapped child program for children 3-4 years of age will go into effect in July 1991.

The Parents As Teachers program is hoping for state funding in the future.

Higher-order thinking skills programs may be part of the math curriculum in the math improvement program.

Kansas SEA created a minimum competency testing program. District officials expressed reservations about the plan, and it died when the legislature declined to fund it. The SEA is currently seeking funding for a math assessment program.

Linkage between education and economic development is expressed in the vocational education and community college programs' close connections with local industry. State government is constantly organizing to promote economic development.

MISSOURI

IMPROVEMENT OF PERSONNEL

Beginning teacher programs get assistance from the department. Responsibility for inservice functions is being placed at the teacher education institutions.

STATEWIDE CHANGES IN STRUCTURE

There is a new policy on alternative certification. Temporary certification is now for two years. The whole process is more person-centered. That is, the special needs of the district and the qualities of the person involved are given major consideration.

By July 1, 1990, there will be changes in accreditation standards as the classification system is reworked.

There is no state curriculum. The state does have key skills and core competencies as a necessary element of the Missouri Minimum Achievement Test.

FINANCIAL SUPPORT FOR PERSONNEL

There are Excellence in Education Act scholarship funds available for teacher education. And, there is tuition reimbursement for active teachers.

There is a state supported career ladder program.

There is a state supported minimum salary program.

SCHOOL-LEVEL PROGRAMS

Vocational programs have the required parent advisory committees. Other districts, rural and urban, are experimenting with different forms of these committees.

The extended day/year is not common in rural areas because of transportation problems. Summer school is often used for at-risk and mastery achievement programs.

There is a Parents As Teachers program in every district. In some districts, the program is used only by professionals; in other districts, needy parents are served. It is expected that this type of program will expand in the future.

Dropout prevention programs are not as prevalent in rural areas. The state department has emphasized at-risk programs for some time. The push is toward earlier intervention, down to kindergarten and the early primary grades.

Every district is required by state law to have a discipline plan on file. It is a local option as to what plan or form of plan is enacted. The plan must be board approved.

Higher-order thinking skills programs are more likely to be seen at the building level. There will be more emphasis on this in the future, but not specifically for rural populations.

Achievement testing is state organized and mandated, but local districts choose the test. The MMAT program is also a constant factor in every district testing program.

Linkage between education and economic development has received no specific attention from the department. There are federal vocational programs which emphasize business-education linkages or partnerships in larger communities. The Success in Schools is Homemade program, between the department and Southwest Bell Telephone Company promotes home-school relations.

NEBRASKA

IMPROVEMENT OF PERSONNEL

There are no beginning teacher programs, and no probationary teacher programs. Mentors occur on a local basis. There is a great deal of inservice and staff development activity from the education service units.

STATEWIDE CHANGES IN STRUCTURE

School accreditation will operate under new rules being made up now. The agency has very broad curriculum oversight. There is no mandate; the state defines the titles of courses a district must have.

FINANCIAL SUPPORT FOR PERSONNEL

There is a minimum salary program. It begins at $16,000 and stops at $19,000.

There are district career ladder type programs, not state supported.

SCHOOL-LEVEL PROGRAMS

Parent advisory committees are in existence on a local basis only.

One or two districts have experimented with extended day/year programs.

Any student enrolled at age 5 must be pre-tested. The trend is for parents to keep their children out until they are older.

There is an early childhood education specialist in the department. The emphasis is state wide, not just rural.

Parents As Teachers is on a local basis. The teachers are concerned that the parents be seen as aids and assistants, not teachers.

Dropout programs exist in the form of alternative schools in urban areas only.

Tracking is a local option. The perception is that fewer districts are doing it.

There is a state achievement test, the N-ABELS. The ACT is also used by secondary students. Testing is an issue because of fear of comparison among districts.

There is recognition of the linkage between education and economic development, but it is only recognition at this time. There is the traditional, mutually rewarding linkage between vocational education and community colleges and secondary schools.

NORTH DAKOTA

IMPROVEMENT OF PERSONNEL

No programs were mentioned.

STATEWIDE CHANGES IN STRUCTURE

Nothing was added beyond earlier discussion above.

FINANCIAL SUPPORT FOR PERSONNEL

No programs were mentioned.

SCHOOL-LEVEL PROGRAMS

Parent involvement programs are strictly community based.

Children may test into school if they are younger than the statutory 6 years of age, but they do not have to enter school until age 7.

There is limited early childhood education. Statewide kindergarten is just now gaining strength. There are no other formal, articulated programs.

Dropout programs include alternative schools and adult learning centers. The student can leave school at age 16. If the student cannot succeed in the regular setting, he/she may go to an alternative school. These initiatives are mostly urban. There is a childrens' cabinet chaired by the Lt. Governor. Its concerns center around at-risk youth.

There is an increased emphasis on vocational education. There is more hands-on instruction from regular teachers, so the perception of difference between vocational and regular education is lessening. In general, tracking is not looked upon favorably.

There is a new statewide achievement testing program. All students in grades 3, 5, 7, 9, and 11 will be tested. There is concern the information will be used to discriminate between districts. About 5 school districts are involved with school-business partnerships. The state is looking for broader participation. There is a perception that education and the economy must be closer. Now, the link is typically at the vocational education level. There are some concerns about such relationships because the school may be seen as providing training for the business and granting a competitive advantage.

Other concerns were outmigration of students and parents. The problem is to get long range planning for 20 years from now.

SOUTH DAKOTA

IMPROVEMENT OF PERSONNEL

The School Improvement Program has two initiatives. One is the effective schools research, using two outside consultants. The other is the governor's SIP. It includes five years worth of Stanford Achievement Test data in grades 4, 8, and 11. Measures of school ability were compared with school achievement. The 50 schools with the greatest discrepancy between ability and achievement measures were invited by the governor to participate in the SIP.

The SIP is using a building level team approach. The school is aided in data collection, and will be helped in writing and implementing its own SIP. Another plan, called the Three-Year School Improvement Cycle, is in its second year. It is voluntary, and requires building level commitment. The state agency provides staff development services, data collection, and technical assistance. There is a new group added every year.

The state does not release achievement information at the state level. It is released at the local level only.

Other improvement initiatives are:

1. School leader project--administrator renewal and training.

2. Associate instructor program--occurs the first year of teaching with a probationary certificate. There are 3-4 observations a year by the institution, the state agency, and others. The legislature did away with this program last session.

3. State-Local Board mentorship program--voluntary, for first year teachers. There is a stipend for the mentor--a person experienced in education. The state agency is now constructing a 15 hour training program for mentors. If completed, the mentor receives a certificate of acknowledgement.

STATEWIDE CHANGES IN STRUCTURE

There is a financial incentive for consolidation. If a high school falls below 35 pupils, it loses state aid. The agency's concern is "quality of education during the dying years." The districts may manipulate enrollments to preserve local control while the quality of the education offered declines.

There is no alternative certification. There is a provisional certificate for emergency situations.

School improvement is receiving attention. There have been sweeping changes this last year, for example, in special education. This year, accreditation, including curriculum, will be addressed. Next year, the target is certification.

FINANCIAL SUPPORT FOR PERSONNEL

No initiatives in this area were noted.

SCHOOL-LEVEL PROGRAMS

Chapter One includes parental involvement. Beyond that, there are no other formal programs. The drug-free schools projects are likely to include a parent component.

Early childhood education is limited to federal programs for handicapped students, birth to age two or three.

Parent education is limited to the above mentioned handicapped student program.

Dropout programs include the governor's at-risk program which directs the state agency to do more in dropout prevention. There are two model sites for the target group, American Indians. There is an on-reservation pilot, and a pilot in Rapids City. There is also an effort toward community and multi-agency efforts in alternative schools programming.

Higher-order thinking skills training occurs in some schools, mostly as a summer time program. There are now state matching grants for summer curriculum. There has been increased interest in this lately.

Concerning tracking, vocational education was mentioned, but in the context of a post-secondary endeavor.

Subject-specific programs include Title II and D. D. Eisenhower grants for staff development and curriculum, e.g. math.

There is currently no earmarked funding for education to have a role in economic development. Economic development is the governor's number one priority issue. There is increasing awareness of education's role.

WYOMING

IMPROVEMENT OF PERSONNEL

Mentor programs exist on a local basis.

Teachers are on probationary status for the first three years. There is no state program of professional development designed just for them. There is no special emphasis on rural issues in teacher or administrator training.

STATEWIDE CHANGES IN STRUCTURE

There is alternative certification for teachers for one year only, and then only in extreme circumstances. The teacher has one year to get certified.

Curriculum is under local control with a state mandated basic offering requirement. To function, a district must offer certain classes, but not a core curriculum. For example, a high school must provide 25 different units so that a student can, in four years, take four science, four social studies, four language arts, four math, two of one foreign language, two art, two music, four vocational education in two areas, and two physical education credits to equal 18 units. The alternative course delivery system operates for rural schools. The state does not mandate what students take, just what they must have to graduate.

FINANCIAL SUPPORT FOR PERSONNEL

There have been scholarships for teacher preparation available for a few years.

There is district support for tuition reimbursement for active teachers. This is somewhat problematic now that money is scarce.

Incentive pay is under discussion, but has not been implemented.

SCHOOL-LEVEL PROGRAMS

Parent involvement programs do not exist in significant numbers. There is a feeling in the state that this is a school board function.

There are alternative schedules by law and regulation for an extended school day or year. The state provides no financial incentive to do this, e.g. summer school, but there is some effort on the local level. Also, local districts do what they can for special populations by using federal funds.

Early childhood education issues went to the state supreme court, which ruled money can indeed be spent on it. Schools cooperate with community agencies to provide this service, but cannot be the primary funding source.

Parents As Teachers occurs through adult education programs. It is local only.

Drop-out programs are also local in nature. The state requires a local policy, but provides no funding.

There is no statewide testing. The state used to take part in national assessment, but the legislature did not renew funding. There are no standards for local district testing. The district may or may not test, and may also do anything it wishes with the results.

Linkage between education and economic development has received attention in the state. The state superintendent's Task Force on Education and Economic Development addresses issues of core curriculum and vocational education, for example. The governor's Educational Policy Implementation Council was established by the legislature. Its charge is to create joint programs between education and business to address economic needs. The elected state superintendent is an exofficio member of both committees. In this position, she is the closest thing to an education leader in the state.

There is no higher education authority in the state. The state board manages K-12, there is a community college board, and the state's university is run by its own board. There is no formal relationship between the three. There was a move to create a super commissioner appointed by the governor to become a state educational leader. However, this proposal was not supported by the legislature.

PROFILES OF SOCIAL AND ECONOMIC ENVIRONMENTS, SCHOOLS AND STUDENTS

INTRODUCTION

Presented in this section are brief state profiles of the social and economic environments within which public education must operate including a short statistical description of the educational system in the state. These profiles highlight the diverse social and economic forces that have affected the seven states. In the appendix are included several charts and numerous thematic maps which also summarize important trends across the seven states.

A more detailed view of these patterns is available in the tables that are included as appendices. The tables organize by state nearly 140 variables for each county grouped by metropolitan status. The tables alert us to the differing circumstances local educational authorities confront. The tables also beg further interpretation and analysis of interrelationships which need to involve state agency representatives. Further analysis and application of this information is underway in at least one of the states.

An overview of statewide trends in the region is presented below. The state profiles follow.

OVERVIEW

- The 1987 populations of the seven states range from 5.1 million people in Missouri to 490,000 in Wyoming.
- Among the seven states only Colorado has experienced a net in-migration of people since 1980, nonetheless, all the states have managed population increases.
- The U.S. population is 23 percent nonmetropolitan. Only Colorado is less nonmetropolitan--18.2 percent. The other states range from a low of 34 percent in Missouri to 71 percent in South Dakota.
- Nonmetropolitan populations have declined in all the states since 1980 except Colorado and Missouri.
- The percent farm employment in the seven states ranges from a low of 3.3 percent in Colorado to 12.8 percent in North Dakota.
- The 1987 per capita income of each state except Colorado ($19,020) is below the national per capita income of $15,313.
- The number of public school students ranges from 802,000 in Missouri to under 100,000 in Wyoming. In Missouri they attend 2,099 schools and in Wyoming fewer than 400.

COLORADO

Overview

Despite downturns in energy, agriculture and recently housing, overall Colorado's economy has performed well during the 1980s. The Colorado front range has become an area of exceptional economic and population growth. The Denver metropolitan area has become a financial, transportation, communication and service center for much of the great plains and mountain region. Denver is at the middle of front range development which is anchored by high tech at the north and by diversified economic growth throughout. Yet, between 1985 and 1986 new housing units declined 7.2 percent and home sales dropped 3.7 percent.

Among Colorado's major economic sectors, only agriculture and energy have failed to keep pace with national economic growth during the past six years. Thus, while overall there has also been economic and population growth in some areas, there has been decline.

Although situated at the point of intersection of two of the nation's least populated regions - the Great Plains and the Rocky Mountains - Colorado has ironically become an urban, metropolitan state. In 1960, the 10 counties that have now become defined as metropolitan included 75% of the state's population. By 1987, those 10 counties had doubled their 1960 population and included 82% of the state's total. While the metropolitan counties' population increased by 104% from 1960 to 1987, the population of the remaining 53 counties increased by a combined total of 39%.

Population

Between 1980 and 1987, the Colorado population increased nearly 14 percent. There were nearly a quarter of a million more births than deaths and about 160,000 more people moved into Colorado than moved out.

The 10 metro counties increased in population by an aggregate 16% from 1980 to 1987.

Among the nonmetro counties, 31 of the 53 gained population from 1980 to 1987. Eight counties had a gain of more than 20% during that period. Most of those counties are either locations of major recreational developments or are within commuting range of major employment centers. Most of those counties also have a relatively small (less than 10,000) total population. The 22 counties that lost population are generally outside the mountain areas and are principally dependent on agriculture and/or energy extraction.

When taken together the rural (nonmetro) counties had 2,400 more people move out of their counties than move in from 1980 to 1987. On the other hand the ten metro counties had a net in-migration of 161,500.

Among the McREL states, Colorado has the youngest population. The population of rural counties is generally older but not uniformly so. In 1985, 11.0% of the rural population was age 65 and older compared with 7.6% of the metro population. In 12 of the 53 nonmetro counties more than 15% of the population was age 65 and over. Those counties are generally

clustered in the eastern half of the state and are mainly small population counties largely dependent on agriculture.

In two metro counties and seven nonmetro counties, fewer than 5% of the population is over 65 - an exceptionally low percentage.

Statewide 7.6% of the children and 11.4% of the adults speak a language other than English very well or well. That other language is Spanish for 5.3% of the children and 7.1% of adults. The proportions are similar for metro and nonmetro counties.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data, the lowest median family income among metro counties was $18,503 in Pueblo county. For comparison purposes 16 of the 53 nonmetro counties had a median family income as high, or higher, than the lowest metro county. Most of the high income nonmetro counties were in the ski and recreation areas to the west of Denver. Among rural counties, 23.8% of families had a median income below $10,000 compared with 15.4% of metro families.

In 1979, 9.2% of the metro population and 12.7% of the rural population was living below the poverty line. In 23 of the 53 rural counties more than 14% of the population was living below the poverty line. In three counties (Costilla, Conejos and Saguache) more than 25% was living below the poverty line.

Total metro personal income increased from $25.5 billion in 1980 to $43.4 billion in 1987 - a 70% increase. Nonmetro personal income increased from $5.3 billion in 1980 to $8.0 billion in 1987 - a 50% increase.

In 1987, transfer payments accounted for 11.6% of metro personal income but 15.7% of nonmetro personal income. More than 20% of total personal income was derived from transfer payments in 12 nonmetro counties and in one metro county (Pueblo). Although significantly associated with retirement, the largest percentages of income derived from transfer payments generally occurred in the lower income counties.

In 1987, per capita income averaged $18,671 in metro counties and $13,296 in nonmetro. Among rural counties, per capita income ranged from a low of $7,631 (Conejos county) to a high of $27,078 (Pitkin county - Aspen). Rural per capita income changed dramatically in many counties from 1980 to 1987. There was an increase in per capita income of more than 75% in 7 counties during that time. The major explanation is a substantial improvement in farm income which was very low in 1980 but improved greatly by 1987.

Among metro counties in 1987, about 31% of earnings were derived from services employment, about 16% each from trades employment and manufacturing and 18% from government employment. Among nonmetro counties, 26% of earnings were derived from services employment, 15% from

trades employment, 19% from government employment and 13% from farming.

Employment

Total metro employment increased by 20.9% from 1980 to 1987 while nonmetro employment increased by 7.6% during that time. Thirty-six of the 53 rural counties gained employment during that time; 15 of those counties gained more than 20%. Most of the counties with the largest gains were in the ski resort areas and/or within commuting range of metropolitan counties.

Among the metro counties, services accounted for 3% of employment in 1987, followed by 21% employed in trades, 17% in government and 11% in manufacturing. Among the rural counties, services accounted for 33% of employment, followed by 21% in trades, 16% in government and 11% in farming.

Education-Schools

There are 177 Colorado school districts operating 1,318 schools and serving a 1987-88 student population of 560,196. Metro counties include 30% of the school districts, 65% of the schools and 80% of the students. There is an average of 7,586 students per district in metro counties and 798 students per district in nonmetro counties.

In 1982, education accounted for 43.0% of local government expenditures in metro counties and 41.8% in nonmetro counties.

For FY 1987-88, there were 30,898 teacher FTEs. The student teacher ratio in metro areas was 18.8 compared with a ratio of 15.9 in nonmetro counties.

Seventy-five percent of metro students are white; 15.3% are Hispanic and 6.2% are black. The remaining 3.5% is divided among Asian and Native American students. In nonmetro areas, 82.0% of students are white; 16.3% are Hispanics and the remaining 1.7% is divided among blacks, Native American and Asian students.

Education-Finance

The equity of Colorado's school finance system improved somewhat between 1984-85 and 1985-86 and the adequacy of the system compared favorably with the other states in the region. The disparity in the property wealth of the school districts was stable over time, but relatively high, forcing the school finance system to work hard to offset the impact of variations in local wealth. In 1985-86, approximately 20 percent of the pupils attended districts with less than half the statewide average property wealth per pupil. At the other end of the distribution, about 20 percent of the pupils were enrolled in districts with property wealth nearly twice as high as the statewide average. Colorado's coefficient of variation for property wealth per pupil was the third highest among the seven states. This situation was not very different from the one that existed in 1984-85. In fact, the coefficient of variation for property wealth per pupil increased by less than two percent during the year.

The disparity in per pupil revenues from state and local sources was far lower than that of property wealth and the level of disparity dropped considerably, indicated by a nearly 20 percent decrease in the coefficient of variation between 1984-85 and 1985-86. Approximately 20 percent of the state's pupils were enrolled in districts with revenues 22 percent more than the statewide average while about 20 percent of all pupils attended districts where revenues were 14 percent less than the statewide average.

The variation in tax rates among Colorado's 177 school districts increased by about 10 percent between 1984-85 and 1985-86. While districts with the lowest tax rates moved slightly closer to the statewide average tax rate, districts with the highest tax rates moved further from the average.

The correlation between per pupil property wealth and per pupil revenues of districts in Colorado was strong, although less strong in 1985-86 than had been the case in 1984-85. Districts with relatively high property wealth had relatively low tax rates, although the negative relationship was not as strong in 1985-86 as it had been in 1984-85. In 1984-85, there was a negative relationship between school district tax rates and their per pupil revenues, suggesting that districts with relatively high tax rates tended to have relatively low revenues. However, in 1985-86, that situation changed; there was a slight positive relationship between the tax rates and the per pupil revenues of districts.

The size of districts had little impact on Colorado's school finance system. In both years, smaller districts tended to have higher per pupil property wealth, higher per pupil revenues, and lower tax rates, but the relationships were very weak.

The one year change in property wealth among Colorado's school districts was substantial. Approximately 20 percent of all pupils were enrolled in districts that lost 9.7 percent of their property value while another 20 percent of the pupils attended districts in which the property value increased by an average of 28.1 percent. The remaining pupils were enrolled in districts that apparently had increases in property wealth, although not to as great an extent. Given the distribution of average property wealth in 1985-86 among the quintiles and the percentage change between 1984-85 and 1985-86, it appears that districts with the largest increases in wealth tended to be relatively poor in 1984-85. This would suggest that smaller districts, which tended to have higher wealth, were the ones most likely to suffer either a decrease in wealth or a relatively low increase in wealth between 1984-85 and 1985-86. In fact, the enrollment levels of the per pupil wealth change quintiles were relatively large (all were greater than 1,500) and there was no apparent relationship between average size and average change in per pupil wealth.

Changes in per pupil property wealth could be due not only to absolute changes in property values but also to changes in enrollment. A district in which property values did not change at all while there was a 10 percent increase in enrollment would actually have an 11 percent decrease in per pupil property wealth. In order to examine whether the cause of the change in per pupil wealth was attributable to changes in the number of pupils enrolled, the average percentage change in enrollment was calculated for

each quintile of per pupil wealth change. As shown in Table 1B, changes in enrollment were very small, far smaller than changes in per pupil wealth, and similar in direction to changes in per pupil wealth. In fact, there was a slightly negative correlation (r = -.16) between the percentage change in enrollment and the percentage change in per pupil wealth for school districts in Colorado. It can be concluded that changes in per pupil wealth were not caused by changes in enrollment but actually reflect changes in the value of property.

Changes in property wealth appear to have had little impact on the per pupil revenue of school districts in Colorado. Districts with decreases in property wealth received revenues which were on average equivalent to those of districts with both relatively small and relatively large increases in property wealth. Interestingly, districts with decreases in property wealth had the largest increases in per pupil revenue. Overall, there was a small, positive relationship (r = .22) between changes in wealth and changes in revenue.

The tax rates of school districts in Colorado also were largely unaffected by changes in property wealth. The average tax rates of districts in which property wealth declined were similar to those of districts in which property wealth increased. However, tax rates increased slightly more rapidly in districts with declining wealth. The correlation between changes in property wealth and changes in tax rates was negative (r = -.40); a moderate level but one suggesting that districts with increases in wealth tended to reduce tax rates.

On the whole, Colorado's school finance system appears to have been sufficiently sensitive to property wealth to handle the changing valuations of districts, including decreases in value. While the variation in property valuation increased slightly, the variation in per pupil revenue decreased; and while the variation in tax rates increased, to some extent reflecting increases in districts losing property value, the net impact was to change the relationship between tax rates and per pupil revenue from a negative one to a positive one.

KANSAS

Overview

Although traditionally an agricultural and energy extraction state, the Kansas economy has been diversifying and there have been dynamic changes in both the major natural resource based industries. The diversification of the economy has enabled Kansas to achieve continued population growth during the past 25 years despite a declining number of farms and reduced employment in the energy industry during the 1980s. This trend has resulted in Kansas having become a metropolitan state. In 1960, 45% of the population resided in metropolitan counties; in 1987, 53% resided in metro counties. Since 1960, the metro population has grown steadily (32% increase from 1960 to 1987) while the nonmetro (rural) population has declined (-2%) during that time. The rural population decline was not dramatic, having been offset to some degree by substantial growth during the energy boom of the 1970s. The metro population growth however has been highly concentrated in a 6 county area in the northeast corner of the state. Sixty-four percent of the metro population is located in that 6 county cluster.

Kansas agriculture was traditionally divided east and west according to the amount of rainfall. Up to the past 20 years western Kansas was characterized by large farms mostly devoted to cattle ranching and dry land wheat farming. During the past 20 years, however, western Kansas has become importantly dependent on irrigation from an underground aquifer. Correspondingly crop production increased greatly but recently the declining water supply has driven up the cost of irrigation and some land is reverting to dry land farming methods. Eastern Kansas has depended mostly on rainfed agriculture with a combination of crop and livestock production. Southwest Kansas has experienced substantial increases in employment with a concentration of cattle feed lots and beef processing in that region. It has become a major concentration of that sector of agriculture in the nation.

Population

All 9 metro counties increased in population from 1980 to 1987 with Johnson county (suburban Kansas City) increasing by 23%.

Among the nonmetro counties, 78 of the 96 lost population from 1980 to 1987. The counties that gained population were generally either within commuting range of metropolitan areas or were in the southwest corner which has experienced substantial increases in employment associated with the beef industry. One of those counties (Finney-Garden City) experienced a 27% increase from 1980 to 1987. Twelve of the losing counties lost more than 10% of their population - they were all counties having a very small (less than 10,000) population.

When taken together, the rural (nonmetro) counties had 60,000 more people move out of their counties than move in from 1980 to 1987. On the other hand the metro counties together had a net of 40,000 more people move in than move away during those years.

The population of rural counties is generally older. In 1985, 12.8% of the rural population was age 65 and older compared with 9.9% of the metro population. In 29 of the 96 nonmetro counties more than 20% of the population was age 65 and over. They were almost all counties with a small total population (less than 10,000).

Statewide 3.3% of the children and 4.7% of the adults speak a language other than English very well or well. Spanish is that other language for 1.7% of the children and 1.7% of adults.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data the lowest median family income among metro counties was $18,655 in Wyandotte (Kansas City, Kansas) county. For comparison purposes only 16 of the nonmetro counties had a median family income as high or higher than the lowest metro county. Among rural counties 18.7% of families had a median income below $10,000 compared with 14.5% of metro families.

In 1979, 8.4% of the metro population and 11.2% of the rural population was living below the poverty line. In 24 of the 96 rural counties, more than 14% of the population was living below the poverty line. That was true of only 1 metro county.

Total metro personal income increased from $13.1 billion in 1980 to $21.4 billion in 1987 - a 63% increase. Nonmetro income increased from $10.5 billion in 1980 to $16.1 billion in 1987 - a 54% increase.

In 1987 transfer payments accounted for 11.8% of metro personal income but 16.2% of nonmetro personal income. More than 20% of total personal income was derived from transfer payments in 13 nonmetro counties but in no metro counties. Those 13 counties are concentrated in southeast Kansas and the high proportion of transfer payment income is clearly associated with retirement.

In 1987 per capita income averaged $16,346 in metro counties and $13,860 in nonmetro. Among rural counties, per capita income ranged from a low of $10,680 (Geary county) to a high of $23,393 (Stevens county). The highest rural per capita income counties are almost all located in western Kansas where a low population and large farms are the rule.

Among metro counties, about 28% of earnings are derived from services employment and 22% from manufacturing employment. Among nonmetro counties 21% of earnings are derived from services employment, 16% from farming, 14% each from manufacturing and trade.

Employment

Total metro employment increased by 16.5% from 1980 to 1987 while nonmetro employment increased by only 1.6% during that time. Fifty two of the rural counties lost employment during that time with some of the counties dependent on energy extraction having the largest losses. The largest gains were in southwest Kansas associated with the feedlot and meat packing industries and counties that are within commuting range of metro counties.

Among the metro counties, services account for 33% of employment in 1987, followed by 22% employed in trades, 16% in government and 15% in manufacturing. Among the rural counties, services accounted for 29% of employment, followed by 20% in trades, 18% in government, 13% in manufacturing and only 7% in farming.

Education-Schools

There are 304 Kansas school districts operating 1,463 schools and serving a 1987-88 school population of 421,112. Metro counties include 17% of the school districts, 34% of the schools and 51% of the students. There is an average of 4,219 students per district in metro counties, 808 students per district in nonmetro counties.

In 1982, education accounted for 43.4% of local government expenditures in metro counties and 46.6% in nonmetro counties.

For FY 1987-88, there were 25,913 teacher FTEs. The student teacher ratio in metro areas was 17.6 compared with a ratio of 14.9 in nonmetro counties.

Eighty one percent of Kansas metro students are white; 12% are black; 3% Hispanic and the remaining 2% divided among other minorities. Among the nonmetro student population, 91% are white, 3% black, 4% Hispanic and the remaining 2% other minorities.

Education-Finance

The school finance system in Kansas deteriorated slightly in terms of equity between 1984-85 and 1985-86. The adequacy of the system was average compared with the other states in the region. The disparity in the property wealth of the school districts was very high and growing, which required the school finance system to work that much harder to offset the impact of the variation in local wealth. In 1985-86, approximately 20 percent of the pupils attended districts with less than half the statewide average property wealth per pupil while roughly 20 percent of the pupils were enrolled in districts with property wealth more than twice as high as the statewide average. The coefficient of variation for property wealth per pupil in Kansas was the second highest among the seven states and increased by about 15 percent during the year. This situation was even worse than the one that existed in 1984-85.

The disparity in per pupil revenues from state and local sources was far lower than that of property wealth, but the level of disparity increased considerably, indicated by a 16 percent increase in the coefficient of variation. Approximately 20 percent of the state's pupils were enrolled in districts with revenues 27 percent more than the statewide average, while about 20 percent of all pupils attended districts that had revenues 21 percent less than the statewide average.

Although Kansas' variation in tax rates decreased by approximately 3 percent from 1984-85 to 1985-86, the variation among the 304 school districts remained extremely high, ranking second among the seven states. Districts in the lowest quintile (Quintile 1) had taxes which were about 34 percent below the statewide average. Districts in the highest quintile had tax rates that were 27 percent above average. However, districts with both the lowest tax rates and the highest tax rates moved slightly closer to the average tax rate for Kansas.

The correlation between the per pupil property wealth and per pupil revenues of districts in Kansas was moderate, although less strong in 1985-86 than had been the case in 1984-85. Districts with relatively high property wealth had relatively low tax rates, although the negative relationship was not as strong in 1985-86 as it had been in 1984-85. In the first year, there was a neutral relationship between school district tax rates and their per pupil revenues, suggesting that tax rates had little relationship to district per pupil revenues. By 1985-86, the relationship had become slightly more negative.

The size of districts had little impact on the school finance system in Kansas. In both years, smaller districts tended to have higher per pupil property wealth, higher per pupil revenues, and lower tax rates, but the relationships were weak.

The one year change in property wealth among school districts in Kansas was moderate. Approximately 20 percent of all pupils were enrolled in districts that lost 7.0 percent of their property value while another 20 percent of the pupils attended districts in which the property value increased by an average of 8.5 percent. The remaining pupils were enrolled in districts that apparently had relatively small increases or decreases in property wealth. Given the distribution of average property wealth in 1985-86 among the quintiles and the percentage change between 1984-85 and 1985-86, it appears some wealthy districts experienced losses in property value, while other wealthy areas received the greatest increases in property values. In general, districts with more average wealth changed the least in value.

Changes in enrollment were relatively small and opposite to changes in per pupil wealth. It appears that much of the decrease in wealth in the first quintile is due to increases in enrollment rather than decreases in value. Among those districts with the largest increases in wealth, the change appears to be more attributable to changes in value than to changes in enrollment. In fact, the correlation between percentage change in wealth and percentage change in enrollment was moderately negative ($r = -.58$) indicating that large changes in enrollment were associated with small changes in wealth. Examining the absolute enrollment level of districts, it

appears that decreases in wealth tended to occur in small districts. Districts in the first quintile of wealth change, which had the largest average decrease in wealth, were also the smallest districts, on average. However, the smallest districts had the largest increases in enrollment, which appears to explain the deterioration in wealth between 1984-85 and 1985-86.

Changes in property wealth appear to have had little impact on the per pupil revenue of school districts in Kansas. Between 1984-85 and 1985-86, the per pupil revenues of all districts decreased slightly. Districts with decreases in property wealth had per pupil revenue levels equivalent to or slightly higher than those of districts with increases in property wealth. Districts with decreases in property wealth tended to experience slightly greater decreases in per pupil revenue compared to districts where property wealth increased. Overall, there was a weak, positive relationship (r = .37) between changes in wealth and changes in revenue.

The tax rates of school districts in Kansas appear to have been affected by changes in property wealth. The average tax rates of districts in which property wealth declined were lower than those of districts in which property wealth increased. However, tax rates increased much more rapidly in districts with declining wealth. The correlation between changes in property wealth and changes in tax rates was negative (r = -.34); suggesting that districts with increases in wealth tended to have lower associated increases in tax rates.

On the whole, the school finance system in Kansas was not as equitable as it was in 1984-85. Indicators show some lack of sensitivity to changes in property wealth. Both the variation in property wealth and per pupil revenue increased significantly while tax rates increased with little change in their level of disparity. To some extent, the system seemed to be correcting itself for prior problems by increasing the tax rates more rapidly in smaller, wealthier districts. This resulted in less disparity in tax rates and a slightly weaker, but negative, relationship between tax rates and property wealth.

MISSOURI

Overview

The diversified Missouri economy, with its base in manufacturing and agriculture, reflects the several regions of the United States that come together in the State. As the Missouri River winds eastward across the mid-section of the state, it defines the boundary between the Sun Belt to the south and the Corn Belt to the north. The nonmetropolitan area north of the river is home to large-scale commercial farming with annual agricultural sales exceeding $1.2 billion. South of the river the Ozarks invite large numbers of smaller farms, many associated with part-time or retirement workers--Missouri is home to the second largest number of farms in the U.S. The Southwestern part of the state is influenced by many lake developments which attract tourism and retirement, as well as the continuing emergence of Springfield, Missouri--one of the fastest growing metropolitan areas in the country. The Southeastern part of the state is less densely settled and includes extensive timberlands incorporated into the Mark Twain National Forest. Further south, the Missouri Bootheel is a distinctive region of prime agricultural land reclaimed early in the century from southeastern swamp lands. In the agricultural areas of the north and in the Bootheel, populations are continuing a slow decline due mostly to out-migration (especially among young adults). In the south, except for a few areas impacted by mining operations, the economy is expanding and the population is increasing.

Missouri is also where the East meets the West. The Kansas City and St. Louis metropolitan areas dominate either ends of the state. While the central cities continue to decline in population, the communities just beyond them are booming. Among the fastest growing areas are the metropolitan fringe counties surrounding both metropolitan areas. A strong base of manufacturing which has maintained a relatively consistent level of employment over many years, together with an expanding service sector, has fueled this growth.

Population

Within Missouri's metropolitan areas, the pattern of the 1970's has repeated in the 1980's. The large, older central cities have experienced a continuing net out-migration. The City of St. Louis declined by 6.8 percent between 1980 and 1987. St. Charles County, a little further west in the metro areas, recorded a 34 percent jump in population over the same period.

Among nonmetropolitan counties in the state, 50 gained population between 1980 and 1987 and 48 lost population. The nonmetropolitan counties that declined were northern or Bootheel counties and a few mining counties. The nonmetropolitan counties that increased were either within commuting distance of metropolitan areas or in the southern part of the state.

Taken together the nonmetropolitan counties had 9,300 more people move into them than move out of them. At the same time, the metropolitan counties lost 16,700 due to net migration. Overall, the metropolitan areas grew more rapidly than the non-metropolitan areas because they have younger populations and, consequently, had much greater natural increase (more births than deaths) than the nonmetropolitan areas.

The Missouri population is the seventh oldest in the country with 13.1 percent of the nonmetropolitan population over 65 years old compared with 11.6 percent in the metropolitan areas. In 26 of Missouri's 115 counties more than 20 percent of the population is over age 65.

The number of births to teenage mothers declined between 1980 and 1984 in both metropolitan and nonmetropolitan areas. The proportion of births to very young teenage mothers (under 15) also declined.

Income

According to 1980 Census data, four nonmetropolitan counties in the state had median family incomes below $10,000. Less than half of the nonmetropolitan counties had median family income that were as high as the lowest metropolitan county. Among nonmetropolitan families in Missouri, 21.9 percent had median family incomes under $10,000 compared with 16.8 percent of metropolitan families.

Based on 1980 Census data, 11.8 percent of the nonmetropolitan and 9.8 percent of the metropolitan population was living below the poverty level. In 68 out of 98 non-metropolitan counties, more than 14 percent of the population was below the poverty level. Only two of the 17 metropolitan counties had greater than 14 percent of the population living in poverty.

Total personal income in Missouri increased from $45.7 billion in 1980 to $74.8 billion in 1987--63 percent gain. Metropolitan areas accounted for $55 billion of the 1987 personal income and had a 65 percent gain over 1980 levels. The nonmetropolitan counties accounted for $19.8 billion of personal income in 1987 and had a 59.8 percent gain over 1980 levels.

In 1987, transfer payments accounted for 12.7 percent of total personal income among metropolitan counties but 14.8 percent of total personal income among non- metropolitan counties. In 1987, only the city of St. Louis had more than 20 percent of personal income in the form of transfer payments. Transfer payments accounted for more than 20 percent of total personal income in 60 of the 98 nonmetropolitan counties. Transfer payments are payments to individuals for other than current services. Most are social security or retirement payments; some welfare payments are included. No agricultural commodity payments are included.

In 1987, per capita income among metropolitan counties was $16,344 and $14,680 among nonmetropolitan counties. Among the nonmetropolitan counties, per capita income ranged from a low of $7,000 in Shannon County to $13,937 in Gasconade County.

Between 1980 and 1987 AFDC payments increased 10.4 percent among metropolitan counties and 46.8 percent among nonmetropolitan counties. Food stamp payments increased 30.7 percent in metropolitan areas and 61 percent in nonmetropolitan areas.

Employment

Missouri employment increased 14.6 percent between 1980 and 1987. In metropolitan areas, employment increased 15.8 percent while in nonmetropolitan areas it increased 11.6 percent. Among nonmetropolitan counties, 21 lost employment. Most of these were in agricultural or mining areas. Among metropolitan counties, only the City of St. Louis experienced a decline in total employment over the same period.

Among Missouri metropolitan areas in 1987, services accounted for 36 percent of employment, followed by 22.5 percent employed in trades, 15.6 employed in manufacturing and 7.9 employed in government. Among nonmetropolitan areas, services accounted for 33.3 percent of employment; followed by 21.2 percent employed in trades; 14.9 percent employed in manufacturing; 9.3 percent employed in government; 5.8 percent employed in transportation and utilities; and 5.5 percent employed in farming.

Education-Schools

There are 544 Missouri school districts, operating 2,096 schools and serving a 1987-88 school population of 802,014 students. Metropolitan counties account for 20 percent of the school districts, 38 percent of the schools, and 46 percent of the students. There is an average of 3,367 students per district in the metropolitan areas and 995 students per district in the nonmetropolitan areas.

In 1982, education accounted for 44.6 percent of local government expenditures in metropolitan areas and 51.2 percent of local government expenditures in non- metropolitan areas.

For the 1987-88 school year in Missouri, there were 48,052 classroom teacher FTEs. The student teacher ratio in metropolitan areas was 17.0 compared with a ratio of 16.4 in nonmetropolitan areas.

Missouri does not report student enrollment by race.

Education-Finance

The equity of Missouri's school finance system improved considerably between 1984-85 and 1985-86 and the adequacy of the system compared favorably with the other states in the region, in part reflecting a relatively large increase in per pupil revenues of the state's 544 school districts. The disparity in the property wealth of the school districts was relatively low and stable over time. In 1985-86, approximately 20 percent of the pupils attended districts with slightly less than half the statewide average property wealth per pupil while about 20 percent of the pupils were enrolled in districts with property wealth nearly 90 percent higher than the statewide average. Missouri's coefficient of variation for property wealth per pupil was the third lowest among the seven states. This situation was not very different from the one that existed in 1984-85. In fact, the coefficient of variation for property wealth per pupil increased by about five percent during the year.

The disparity in per pupil revenues from state and local sources was far lower than that of property wealth. The level of disparity dropped considerably, as indicated by a nearly 18 percent decrease in the coefficient of variation between 1984-85 and 1985-86. Approximately 20 percent of the state's pupils were enrolled in districts that had revenues 38 percent higher than the statewide average while about 20 percent of all pupils attended districts that had revenues 20 percent lower than the statewide average.

The variation in tax rates among Missouri's school districts increased by over 54 percent between 1984-85 and 1985-86. Districts with both the lowest and highest tax rates moved significantly further from the statewide average tax rate.

The correlation between the per pupil property wealth and per pupil revenues of districts in Missouri was moderate, declining slightly between 1984-85 and 1985-86. Districts with relatively high property wealth had somewhat higher tax rates and the positive relationship grew stronger in 1985-86 than it had been in 1984-85. In 1984-85, there was a weak, positive relationship between the tax rates of school districts and their per pupil revenues. In 1985-86, that relationship grew far stronger, indicating that districts with higher tax rates generally had higher per pupil revenue levels.

The size of districts had no impact on Missouri's school finance system. In both years, smaller districts had a very small tendency to have higher per pupil property wealth, higher per pupil revenues, and higher tax rates but the relationships were extremely weak.

The one year change in property wealth among Missouri's school districts was substantial. Approximately 20 percent of all pupils were enrolled in districts that lost 19.7 percent of their property value while another 20 percent of the pupils attended districts in which the property value increased by an average of 35.0 percent. The remaining pupils were enrolled in districts in which changes in wealth were somewhat more moderate. Percent change among the quintiles ranged quintiles from a loss of 9.9 percent to an increase of 10.1 percent. Apparently, districts with the highest wealth in 1984-85 tended to have the greatest loss in wealth during the subsequent year. Districts with the lowest per pupil property wealth showed the greatest increase in wealth between 1984-85 and 1985-86.

Changes in enrollment were very small, far smaller than changes in per pupil wealth. In fact, there was a small negative correlation ($r = -.24$) between the percentage change in enrollment and the percentage change in per pupil wealth for school districts in Missouri. Thus, it can be concluded that changes in per pupil wealth were not caused by changes in enrollment, but actually reflect changes in the value of property. It appears that smaller districts in Missouri were the ones in which property wealth increased to the greatest extent, although it should be noted that such districts were also generally the least wealthy in 1984-85.

Changes in property wealth appear to have had little impact on the per pupil revenue of school districts in Missouri. Per pupil revenues grew in all districts and the rate of growth appears to have been unrelated to changes in property wealth. Overall, there was a small, positive relationship ($r = .25$) between changes in wealth and changes in revenue.

The tax rates of school districts in Missouri were affected by changes in property wealth. Between 1984-85 and 1985-86, all property in Missouri was reassessed and state aid for schools increased dramatically, resulting in lower property tax rates. Where property values increased the most, property tax rates declined the most. To some extent this indicates that low wealth communities, which also had relatively low spending, did not take advantage of increases in either their own wealth or the amount of aid they received from the state in order to raise spending but, rather, rolled back property tax rates. In fact, property tax rates were far lower in districts which experienced the largest increases in property wealth. The correlation between changes in property wealth and changes in tax rates was moderate ($r = -.35$), a moderate level but one suggesting that districts with increases in wealth tended to reduce tax rates.

On the whole, Missouri's school finance system appears to have been reasonably sensitive to property wealth, although there was plenty of room for further reduction in the disparity of the per pupil revenues of districts. While the variation in property valuation increased slightly, the variation in per pupil revenue decreased. At the same time, the variation in tax rates increased and the positive relationship between tax rates and per pupil revenues grew stronger. In Missouri, it appears that there is a problem in those small school districts which have relatively low wealth. These districts tend to keep property tax rates low, resulting in revenues that are slightly lower than those of other districts.

NEBRASKA

Overview

Although traditionally an agricultural state, the Nebraska economy has been diversifying and there have been some significant changes in the form and location of agricultural production. The diversification of the economy has enabled Nebraska to achieve continued population growth during the past 25 years despite a declining number of farms and the loss of rural businesses that serve agriculture.

Although all of Nebraska's population growth over the past 25 years has occurred in metropolitan counties, the state retains a higher proportion of nonmetro (rural) than metro population. In 1960, 39% of the population resided in metropolitan counties; in 1987, 47% resided in metro counties. Since 1960, the metro population has grown steadily (36% increase from 1960 to 1987) while the nonmetro (rural) population has declined (-2%) during that time. The nonmetro population decline over that period has not been dramatic, having been offset to some degree by a net 2% population gain during the 1970s. But the gain of the 1970s was all lost during the 1980s.

The metro population growth, however, has been confined to five counties on the eastern border of the state. Ninety eight percent of the metropolitan population is located in four adjacent counties forming a Lincoln-Omaha connection.

Nebraska agriculture was traditionally divided east and west according to the amount of rainfall. The east has been the western extension of the Corn Belt and the west has been the beginning of the Great Plains. Up to the past 20 years, western Nebraska was characterized by large farms and ranches mostly devoted to cattle and dry land wheat production. During the past 20 years however southwestern Nebraska has become importantly dependent on irrigation from an underground aquifer. Correspondingly crop production increased greatly, but recently the declining water supply has driven up the cost of irrigation and some land is reverting to dry land farming methods. Eastern Nebraska has depended mostly on rainfed agriculture with a combination of crop and livestock production. There are some emerging large scale livestock enterprises, such as confinement hog operations, appearing in northeast Nebraska.

Population

All five metro counties increased in population from 1980 to 1987 with Sarpy county (suburban Omaha) increasing by 13%.

Among the nonmetro counties, 78 of the 87 lost population from 1980 to 1987. The nine nonmetro counties that gained population were generally either within commuting range of metropolitan areas or had a larger town that serves as a regional trade center such as Grand Island (Hall county), Columbus (Platte county) and Kearney (Buffalo county). However, no nonmetro county gained more than 9% in population and some regional centers, such as Scotts Bluff, lost population. Nine of the losing counties lost more than 10% of their population - they were all counties having a very small (less than 5,000) population.

When taken together the rural (nonmetro) counties had 51,000 more people move out of their counties than move in from 1980 to 1987. The metro counties also had more people move out than move in although the net-outmigration for the metro counties was only 6,900.

The population of rural counties is generally older. In 1985, 16.2% of the rural population was age 65 and older compared with 9.4% of the metro population. In 20 of the 87 nonmetro counties, more than 20% of the population was age 65 and over. They were almost all counties with a small total population (less than 10,000).

Statewide, 2.5% of the children and 5.2% of the adults speak a language other than English very well or well. Spanish is that other language for 1.1% of the children and 1.1% of adults.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data the lowest median family income among metro counties was $19,426 in Dakota (suburban Sioux City, Iowa) county. For comparison purposes, only 7 of the 87 nonmetro counties had a median family income as high, or higher, than the lowest metro county. Among rural counties, 22.8% of families had a median income below $10,000 compared with 14.8% of metro families.

In 1979, 8.6% of the metro population and 11.9% of the rural population was living below the poverty line. In 45 of the 87 rural counties, more than 14% of the population was living below the poverty line. The highest rate among metro counties was 9.7%.

Total metro personal income increased from $7.2 billion in 1980 to $11.3 billion in 1987 -- a 57% increase. Nonmetro personal income increased from $7.4 billion in 1980 to $11.5 billion in 1987 -- a 55% increase.

In 1987, transfer payments accounted for 12.4% of metro personal income but 13.7% of nonmetro personal income. More than 20% of total personal income was derived from transfer payments in 5 nonmetro counties but in no metro counties.

In 1987, per capita income averaged $15,003 in metro counties and $13,740 in nonmetro. Among rural counties, per capita income ranged from a low of $9,388 (Thurston county) to a high of $29,473 (Stevens county). Rural per capita income changed dramatically in many counties from 1980 to 1987. There was an increase in per capita income of more than 100% in 18 counties during that time. The major explanation is a substantial improvement in farm income which was very low in 1980 but improved greatly by 1987.

Among metro counties in 1987, about 33% of earnings are derived from services employment, 17% from trades employment and 13% from manufacturing employment. Among nonmetro counties, 26% of earnings are derived from services employment, 16% from trades employment, and 13% each from farming and manufacturing.

Employment

Total metro employment increased by 14.4% from 1980 to 1987 while nonmetro employment increased by only 5.3% during that time. Seventy four of the 87 rural counties lost employment during that time; 17 of those counties lost more than 10%. Many of the largest losses were along the northern border and in the Sand Hills region. The counties that gained population are generally either within commuting range of metro counties or have a larger regional town.

Among the metro counties, services accounted for 37% of employment in 1987, followed by 22% employed in trades, 18% in government and 10% in manufacturing. Among the rural counties, services accounted for 31% of employment, followed by 22% in trades, 16% in government, 10% in manufacturing and only 9% in farming.

Education-Schools

There are 811 Nebraska school districts operating 1,526 schools and serving a 1987-88 school population of 267,601. Metro counties include 5% of the school districts, 18% of the schools and 45% of the students. There is an average of 2,278 students per district in metro counties and 154 students per district in nonmetro counties.

Statewide, 18% of students are eligible for free lunch; 18.4% in metro counties and 17.7% in nonmetro.

In 1982, education accounted for 41.1% of local government expenditures in metro counties and 51.5% in nonmetro counties.

For FY 1987-88, there were 17,623 teacher FTEs. The student teacher ratio in metro areas was 17.5 compared with a ratio of 13.6 in nonmetro counties.

Eighty five percent of Nebraska metro students are white; 11% are black; 2% Hispanic and the remaining 2% divided among other minorities. Among the nonmetro student population, 95% are white, 2.5% Hispanic, 1.3% native America and the remaining 1.2% other minorities.

Education-Finance

Nebraska is one of the states for which 1984-85 data were unavailable. As a result, the only information presented is for 1985-86 and no conclusions can be drawn about how changes in property wealth between 1984-85 and 1985-86 affected the school finance system.

The disparity in the property wealth of Nebraska's 914 operating school districts was far higher than that of the other states. In 1985-86, approximately 20 percent of the pupils attended districts with less than half the statewide average property wealth per pupil. At the other end of the distribution, about 20 percent of the pupils were enrolled in districts with property wealth roughly 120 percent more than the statewide average.

At the same time, the variation in the per pupil revenues of districts was significantly greater than that of the other states. In 1985-86, approximately 20 percent of the pupils attended districts with per pupil revenues 29 percent less than the statewide average. About 20 percent of the pupils were enrolled in districts with per pupil revenues 37 percent over the statewide average.

Tax rates also varied among Nebraska's school districts, although not to an extent that much greater than the other states. In 1985-86, approximately 20 percent of the pupils attended districts with tax rates 29 percent less than the statewide average while about 20 percent of the pupils were enrolled in districts with per pupil revenues 27 percent over the statewide average.

Despite the variation in both property wealth and per pupil revenues, there was no association between the two. That is, the system appears to have been wealth "neutral". At the same time, while there was a negative correlation between the tax rates and per pupil revenues of districts in Nebraska, it was weak. Similar to the other states, enrollment level is unrelated to the wealth, revenue, or tax rates of districts in Nebraska. Thus, despite enormous variations in the state, Nebraska's school finance system appears to work remarkably well.

NORTH DAKOTA

Overview

North Dakota has a largely natural resource based economy with agriculture being dominant but with energy extraction having become a significant addition during the past two decades. Both agriculture and energy extraction experienced boom years during the 1970s. But both agriculture and the energy industry experienced depression-like conditions during the first half of the 1980s and North Dakota's economy has been hard hit in recent years.

North Dakota's agriculture is largely a combination of dry land crop production and ranching. Farms are necessarily large and population density is low throughout the state.

In response to poor economic conditions in natural resource industries in the early 1980s, North Dakotans have been diversifying their economy in recent years. The economic diversification enabled the state to realize some population growth from 1980 to 1987 despite the declining number of farms and ranches and the loss of energy-related employment.

Although all of North Dakota's net population growth over the past 17 years has occurred in metropolitan counties, the state retains a higher proportion of nonmetro (rural) than metro population. In 1960, 27% of the population resided in the four metropolitan counties; in 1987, 38% resided in metro counties. Since 1960 the metro population has grown steadily (49% increase from 1960 to 1987) while the nonmetro (rural) population has declined slowly but steadily (-10%) during that time.

Population

The four metro counties increased in population by an aggregate 9% from 1980 to 1987.

Among the nonmetro counties, 38 of the 49 lost population from 1980 to 1987. Ten counties lost more than 10% of their population during that period. A majority of those counties were in the eastern half, had a small total population and were principally dependent on agriculture. The 11 nonmetro counties that gained population are generally in the west and are either associated with energy extraction or have a larger town or city that is a regional center. Some regional centers such as Jamestown, Grafton and Devils Lake are in counties that lost population.

When taken together, the rural (nonmetro) counties had 27,000 more people move out of their counties than move in from 1980 to 1987. On the other hand, the four metro counties had a 0 net migration -- the same number moved in as moved away.

The population of rural counties is generally older. In 1985, 14.0% of the rural population was age 65 and older compared with 8.7% of the metro population. In six of the 49 nonmetro counties, more than 20% of the population was age 65 and over. Those counties are generally clustered in the eastern half of the state and mainly small population counties largely dependent on agriculture.

Statewide 2.7% of the children and 15.5% of the adults speak a language other than English very well or well. Only a small fraction of those speak Spanish.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data, the lowest median family income among metro counties was $18,307 in Grand Forks county. For comparison purposes, only five of the 49 nonmetro counties had a median family income as high, or higher, than the lowest metro county. Among rural counties 25.0% of families had a median income below $10,000 compared with 16.6% of metro families.

In 1979, 9.0% of the metro population and 13.9% of the rural population was living below the poverty line. In 28 of the 49 rural counties, more than 14% of the population was living below the poverty line. In 4 counties, more than 25% was living below the poverty line.

Total metro personal income increased from $2.2 billion in 1980 to $3.5 billion in 1987 -- a 59% increase. Nonmetro personal income increased from $3.4 billion in 1980 to $5.2 billion in 1987 -- a 54% increase.

In 1987, transfer payments accounted for 13.7% of metro personal income but 18.7% of nonmetro personal income. More than 20% of total personal income was derived from transfer payments in 19 nonmetro counties, but in no metro counties.

In 1987, per capita income averaged $14,111 in metro counties and $12,644 in nonmetro. Among rural counties per capita income ranged from a low of $6,855 (Sioux county) to a high of $16,202 (Divide county). Rural per capita income changed dramatically in many counties from 1980 to 1987. There was an increase in per capita income of more than 75% in 19 counties during that time. The major explanation is a substantial improvement in farm income which was very low in 1980 but improved greatly by 1987.

Among metro counties in 1987, about 31% of earnings were derived from services employment, 20% from trades employment and 22% from government employment. Among nonmetro counties, 21% of earnings were derived from farming, 20% from services employment, 15% from trades employment, and 21% from government employment.

Employment

Total metro employment increased by 15.2% from 1980 to 1987 while nonmetro employment declined by 2.7% during that time. Thirty nine of the 49 rural counties lost employment during that time; 4 of those counties (Billings, Dunn, McKenzie and Slope) lost more than 20%. The largest losses in employment were in those western counties most dependent on the mining and petroleum industries. The 10 nonmetro counties that gained

employment were all in the eastern half and were generally close to metropolitan counties.

Among the metro counties, services accounted for 34% of employment in 1987 followed by 25% employed in trades, 21% in government and 5% in manufacturing. Among the rural counties services accounted for 25% of employment, followed by 20% in trades and farming and 19% in government.

Education-Schools

There are 303 North Dakota school districts operating 638 schools and serving a 1987-88 student population of 119,072. Metro counties include 16% of the school districts, 21% of the schools and 35% of the students. There is an average of 780 students per district in metro counties and 262 students per district in nonmetro counties.

In 1982, education accounted for 46.9% of local government expenditures in metro counties and 55.6% in nonmetro counties.

For FY 1987-88, there were 6,800 teacher FTEs. The student teacher ratio in metro areas was 20.4 compared with a ratio of 15.8 in nonmetro counties.

Ninety five percent of metro students are white; 2% are Native American and the remaining 3% is equally distributed among blacks, Hispanics and Asian students. In nonmetro areas 89.6% of students are white; 8.3% are Native American and the remaining 2% is equally divided among blacks, Hispanics and Asian students.

Education-Finance

North Dakota is the other state for which 1984-85 were unavailable. As a result, the only information presented is for 1985-86 and no conclusions can be drawn about how changes in property wealth between 1984-85 and 1985-86 affected the school finance system.

The disparity in the property wealth of North Dakota's 286 operating school districts was large but not as large as many other states in the region. In 1985-86, approximately 20 percent of the pupils attended districts with slightly more than half the statewide average property wealth per pupil while about 20 percent of the pupils were enrolled in districts with nearly 80 percent more property wealth than the statewide average.

At the same time, the variation in the per pupil revenues of districts was relatively high. In 1985-86, approximately 20 percent of the pupils attended districts with per pupil revenues 19 percent less than the statewide average while about 20 percent of the pupils were enrolled in districts with per pupil revenues 35 percent over the statewide average.

Tax rates also varied among North Dakota's school districts, although not to an extent much greater than that of the other states. In 1985-86, approximately 20 percent of the pupils attended districts with tax rates 34 percent less than the statewide average while about 20 percent of the pupils

were enrolled in districts with per pupil revenues 33 percent over the statewide average.

There was a moderate, positive correlation between the per pupil property wealth and the per pupil revenues of North Dakota's school districts. At the same time, there was a moderate, negative correlation between the tax rates and per pupil revenues of districts. While the correlations between district enrollment level, wealth, revenue, and tax rates of districts in North Dakota are not high, they are somewhat stronger than those of the other states in the region. Small districts tend to have higher property wealth, higher per pupil revenue, and lower tax rates than larger districts.

North Dakota's school finance system appears capable of providing greater equity although there is no reason to believe that inequities affect small districts to a greater extent than other districts. Clearly, however, changes in property wealth could have important ramifications, particularly in a state affected greatly by both agriculture and mineral production.

SOUTH DAKOTA

Overview

There are basically two South Dakotas, each with its own name and identity - East River and West River. East River is dominated by traditional family farm diversified agriculture, largely a western extension of the Corn Belt. West River is the Great Plains and in South Dakota is dominated by ranching country with low population density. Rainfall is low and ranching is land extensive. Also prominent in West River is the Black Hills and the diversification that region brings to the economy. Each of these regions is anchored by a small metropolitan area -- Rapid City in West River and Sioux Falls in East River. Interestingly, the state capital is situated in the middle on the Missouri River and at the intersection of the two major regions.

Although traditionally an agricultural state, the South Dakota economy has been diversifying. The diversification of the economy has enabled South Dakota to realize some population growth from 1970 to 1987 despite a declining number of farms and ranches and the loss of rural businesses that serve agriculture.

Although all of South Dakota's net population growth over the past 17 years has occurred in metropolitan counties, the state retains a higher proportion of nonmetro (rural) than metro population. In 1960, 21% of the population resided in the two metropolitan counties; in 1987, 29% resided in metro counties. Since 1960 the metro population has grown steadily (40% increase from 1960 to 1987) while the nonmetro (rural) population has declined slowly but steadily (-6%) during that time.

An important feature of the South Dakota environment is the presence of several large reservations under the sovereign governments of Native American populations.

Population

Both metro counties increased in population by about 13% from 1980 to 1987.

Among the nonmetro counties, 51 of the 64 lost population from 1980 to 1987. The 13 nonmetro counties that gained population were generally West River, including counties in the Black Hills, were within commuting range of a metropolitan county or had a larger town that serves as a regional trade center such as Pierre (Hughes county) and Codington (Watertown). Two counties in the Black Hills (Custer and Meade) had increases of 15%. Some regional centers such as Aberdeen, Yankton and Brookings lost population. Six of the losing counties lost more than 10% of their population. With one exception they were East River counties.

When taken together the rural (nonmetro) counties had 24,000 more people move out of their counties than move in from 1980 to 1987. On the other hand the two metro counties had 7,700 more people move in than move away.

The population of rural counties is generally older. In 1985, 14.6% of the rural population was age 65 and older compared with 9.3% of the metro population. In 9 of the 64 nonmetro counties more than 20% of the population was age 65 and over. They were all East River agricultural counties with a small total population (less than 10,000).

Statewide 4.7% of the children and 9.1% of the adults speak a language other than English very well or well. For a majority of those persons that other language is a Native American language.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data, the lowest median family income among metro counties was $17,364 in Pennington (Rapid City) county. For comparison purposes, only two of the 64 nonmetro counties had a median family income as high, or higher, than the lowest metro county. Among rural counties, 27.7% of families had a median income below $10,000 compared with 19.6% of metro families.

In 1979, 9.8% of the metro population and 18.6% of the rural population was living below the poverty line. In 51 of the 64 rural counties, more than 14% of the population was living below the poverty line. In 22 counties, more than 25% was living below the poverty line. Most of the counties having high poverty rates have substantial Native American populations.

Total metro personal income increased from $1.7 billion in 1980 to $2.8 billion in 1987 -- a 63% increase. Nonmetro personal income increased from $3.9 billion in 1980 to $6.1 billion in 1987 -- a 54% increase.

In 1987 transfer payments accounted for 13.3% of metro personal income but 17.4% of nonmetro personal income. More than 20% of total personal income was derived from transfer payments in 16 nonmetro counties but in no metro counties.

In 1987, per capita income averaged $13,921 in metro counties and $12,601 in nonmetro. Among rural counties, per capita income ranged from a low of $4,504 (Shannon county) to a high of $19,191 (Sully county). Rural per capita income changed dramatically in many counties from 1980 to 1987. There was an increase in per capita income of more than 80% in 17 counties during that time. The major explanation is a substantial improvement in farm income which was very low in 1980 but improved greatly by 1987.

Among metro counties in 1987, about 33% of earnings were derived from services employment, 18% from trades employment and 11% from manufacturing employment. Among nonmetro counties, 24% of earnings were derived from farming, 20% from services employment, 14% from trades employment, and 9% from manufacturing.

Employment

Total metro employment increased by 19.5% from 1980 to 1987 while nonmetro employment increased by only 7.1% during that time. Thirty seven of the 64 rural counties lost employment during that time; two of those counties (Shannon and Dewey) lost more than 10%. Most of the losing counties are generally smaller population counties heavily dependent on agriculture. Three rural counties gained more than 10% in employment -- Custer (retirement and tourism), Codington (Watertown) and Hughes (Pierre).

Among the metro counties, services accounted for 37% of employment in 1987, followed by 24% employed in trades, 16% in government and 9% in manufacturing. Among the rural counties services accounted for 30% of employment, followed by 22% in trades, 18% in government, 13% in farming and 8% in manufacturing.

Education-Schools

There are 194 South Dakota school districts operating 787 schools and serving a 1987-88 student population of 127,270. Metro counties include 5% of the school districts, 12% of the schools and 29% of the students. There is an average of 3,078 students per district in metro counties and 419 students per district in nonmetro counties.

In 1982, education accounted for 48.9% of local government expenditures in metro counties and 51.2% in nonmetro counties.

For FY 1987-88, there were 8,156 teacher FTEs. The student teacher ratio in metro areas was 17.6 compared with a ratio of 14.8 in nonmetro counties.

Education-Finance

Despite changes in the structure of the school finance system, the equity of the system remained constant between 1984-85 and 1985-86. While the per pupil revenues of school districts in South Dakota was generally lower than those of the other states, the variation in such revenues decreased markedly between 1984-85 and 1985-86.

A relatively low level of disparity in the per pupil property wealth of the state's school districts should facilitate improvements in equity over time. As shown in Table 6, in 1985-86 approximately 20 percent of all pupils were enrolled in districts with about half of the statewide average property wealth per pupil. About 20 percent of the pupils at the high end of the distribution attended schools in districts with per pupil property wealth 70 percent higher than average. South Dakota's coefficient of variation for property wealth per pupil was the lowest among the seven states in 1984-85 and 1985-86, despite growth of 12 percent during the year.

The disparity in per pupil revenues from state and local sources was lower than that of property wealth in both years and the level of disparity dropped considerably, by about 20 percent, between 1984-85 and 1985-86. Approximately 20 percent of the state's pupils were enrolled in districts that had per pupil revenues 19 percent less than average while about 20 percent

of all pupils were enrolled in districts with per pupil revenues 30 percent above average.

The variation in the tax rates of the state's 194 school districts grew considerably, by about 36 percent, between 1984-85 and 1985-86. Districts with both the lowest and highest tax rates moved further form the statewide average tax rate. In 1985-86, about 20 percent of all pupils attended districts with tax rates 46 percent below average which a similar proportion of all pupils attended districts with tax rates 43 percent higher than the statewide average.

Despite a reduction in the variation of per pupil revenues, the positive relationship between revenues and property wealth increased and the negative relationship between revenues and tax rates remained constant. The new school fiance system is supposed to encourage a positive relationship between district tax rates and revenues but is neutral with regard to the relationship between wealth and revenues. This could lead to an increasing revenue disparity among districts.

The size of districts had some impact on South Dakota's school finance system. In both years, smaller districts tended to have higher per pupil property wealth, higher per pupil revenues, and lower tax rates. These relationships were relatively weak, however.

The property wealth of school districts changed substantially between 1984-85 and 1985-86, reflecting changes in assessment levels. Although the property wealth of all districts increased in some districts, the increase was much higher than that of other districts. This may reflect the impact of the farm economy. In 1985-86, districts with the lowest increases in wealth tended to have low wealth and to be small. By the same token, districts with the highest increases in wealth tended to have high property values while also being small.

Changes in per pupil revenue appear to have been related to both the wealth and tax effort of school districts in South Dakota. About 20 percent of all pupils were enrolled in districts that lost an average of 5.9 percent in per pupil revenue. Those districts tended to have the largest increases in enrollment, the lowest increases in wealth, and the largest decreases in tax rates. In fact, those districts had the lowest absolute levels of revenue, wealth and tax rate. At the other extreme, 20 percent of all pupils were enrolled in districts that had, on average, 14 percent increases in per pupil revenues. Those districts tended to be the wealthiest in the state and to have the broadest increases in wealth while having the highest tax rates and the lowest reductions in tax rates. Apparently, the new school finance system is working as it was designed to work. Districts with the highest tax rates had the highest revenue levels. Districts that reduced their tax rates when property values did not grow at an average rate faced low revenue levels.

While it is difficult to determine the impact of the farm crisis in South Dakota due to changes in the structure of the school finance system, the nature of the system could exacerbate the impact in the future. Apparently low wealth districts are choosing low tax rates, which is producing low revenue levels. As long as the school finance system rewards districts that

make high tax efforts, which tend to be relatively wealthy, the revenues of low wealth, low tax districts are likely to remain low. Districts in which property values do not grow at an average rate must continue to maintain at least an average tax effort in order to assure adequate revenues.

Since small districts are not uniformly poor in terms of property wealth, it is difficult to conclude that the farm crisis is affecting the school finance system Further, small districts with very low tax rates need to make at least an average effort before one can conclude that an inequity exists simply because such districts have low revenue levels.

WYOMING

Overview

Wyoming has a natural resource based economy with three major sectors - energy extraction, agriculture and recreation and tourism. However, after experiencing boom conditions during the 1970s, the 1980s brought depression-like conditions for both energy extraction and agriculture. Wyoming's agriculture, however, being principally livestock-based and land extensive did not suffer the severe consequences felt by agricultural states to the east.

Wyoming is a low population density state throughout associated both with the Great Plains in the eastern half and the Rocky Mountains to the west. Counties are large throughout the state and towns are relatively few and far between.

Despite the economic setbacks of the early 1980s, Wyoming has continued a slow growth in population. The state has two metropolitan counties and 21 nonmetro or rural counties. The metro counties declined in population from 1960 to 1970 but have experienced substantial growth since then (32%). In 1987, the two metro counties accounted for 29% of the total population, down from 32% in 1970. Thus, unlike several other states in the region, Wyoming is remaining rural and nonmetropolitan.

Population

The two metro counties increased in population by an aggregate 1.4% from 1980 to 1987.

Among the nonmetro counties, 14 of the 21 gained population from 1980 to 1987. Four counties had a gain of more than 20% during that period. Most of that growth was associated with energy developments. The seven counties that lost population are generally outside the mountain areas and are clustered in the east central part of the state.

When taken together the rural (nonmetro) counties had 15,700 more people move out of their counties than move in from 1980 to 1987. The two metro counties experienced a more significant out-migration. From 1980 to 1987, 12,200 more people moved from the metro counties than moved in. Both the metro and nonmetro counties generally include a small percentage of retired persons in relation to other states in the McREL region. In 1985, 7.7% of the metro population was age 65 and older compared with 7.6% of the nonmetro population. In only two of the 21 nonmetro counties were more than 15% of the population age 65 and over.

In three of the nonmetro counties, fewer than 5% of the population is over 65 -- an exceptionally low percentage.

Statewide, 4.0% of the children and 6.8% of the adults speak a language other than English very well or well. That other language is Spanish for 2.6% of the children and 3.4% of adults.

The number of births to mothers under age 20 has declined from 1980 to 1984 both for metro and nonmetro populations.

Income

According to 1980 Census data, there was no difference in median family income between metro and nonmetro counties. Both metro counties and 13 of the 21 rural counties had a median family income in excess of $20,000. The highest median family income in the state was Campbell (Gillette) county with the major energy developments there. The lowest was Bighorn county with $16,918. For comparison, most other states in the McREL region had several counties with a median family income below $10,000. In the two metro counties, 14% of the families had a median income below $10,000 compared with 15% of nonmetro families.

In 1979, 6.8% of the metro population and 8.1% of the rural population was living below the poverty line. In two of the 21 rural counties, more than 14% of the population was living below the poverty line.

Total metro personal income increased from $1.75 billion in 1980 to $1.96 billion in 1987 -- a 12% increase. Nonmetro personal income increased from $3.6 billion in 1980 to $4.3 billion in 1987 -- an 18% increase. These were the lowest increases in the seven state McREL region.

In 1987, transfer payments accounted for 14.9% of metro personal income, but only 13.9% on nonmetro personal income. More than 20% of total personal income was derived from transfer payments in three nonmetro counties (Big Horn, Goshen and Hot Springs). All three were counties that had a high percentage of the population over age 65.

In 1987, per capita income averaged $13,796 in metro counties and $12,303 in nonmetro. Among rural counties, per capita income ranged from a low of $9,786 (Big Horn county) to a high of $19,207 (Teton county - Jackson Hole). Per capita income actually declined in two nonmetro counties from 1980 to 1987.

Among metro counties in 1987, about 30% of earnings were derived from government employment, about 23% from services employment and 16% from employment in trades. Among nonmetro counties, 25% of earnings were derived from government employment, 19% from services employment, and 16% from mining.

Employment

Total metro employment declined by 11.0% from 1980 to 1987 while nonmetro employment declined by 5.2% during that time. Natrona county (Casper) had a loss of 23.9% and three rural counties (Carbon, Converse and Platte) had employment losses in excess of 20%. Two rural counties (Teton and Uita) had increases of more than 35%.

Among the metro counties, services accounted for 30% of employment in 1987, followed by 25% employed by government and 22% in trades. Among the rural counties, services accounted for 25% of employment, followed by 21% in government, 18% in trades, 9% in mining and 8% in farming.

Education-Schools

There are 49 Wyoming school districts operating 389 schools and serving a 1987-88 student population of 98,572. Metro counties include 9% of the school districts, 20% of the schools and 27% of the students. There is an average of 5,309 students per district in metro counties and 1,363 students per district in nonmetro counties.

In 1982, education accounted for 48.6% of local government expenditures in metro counties and 48.0% in nonmetro counties.

For FY 1987-88, there were 6,421 teacher FTEs. The student teacher ratio in metro areas was 16.9 compared with a ratio of 14.9 in nonmetro counties.

Education-Finance

The equity of Wyoming's school finance system deteriorated slightly between 1984-85 and 1985-86, although the adequacy of the system compared favorably with the other states in the region. The disparity in the property wealth of the school districts was relatively high, forcing the school finance system to work hard to offset the impact of the variation in local wealth. This disparity remained stable over time. In 1985-86, approximately 20 percent of the pupils attended districts with less than a quarter of the statewide average property wealth per pupil while about 20 percent of the pupils were enrolled in districts with property wealth nearly two and one half times the statewide average. The coefficient of variation for property wealth per pupil increased by less than one percent during the year.

The disparity in per pupil revenues from state and local sources was lower than that of property wealth, although the level of disparity increased very slightly between 1984-85 and 1985-86. Approximately 20 percent of the state's pupils were enrolled in districts with revenues 50 percent more than the statewide average while about 20 percent of all pupils attended districts that had revenues 22 percent less than the statewide average.

The variation in tax rates among Wyoming's 49 school districts was extremely low, although it increased between 1984-85 and 1985-86. In 1984-85, there essentially was no variation in tax rates across the districts; by 1985-86, approximately 20 percent of all pupils were enrolled in districts with tax rates 10 percent below the average while about 20 percent of all pupils attended districts with tax rates 14 percent above average.

The correlation between the per pupil property wealth and per pupil revenues of districts in Wyoming was strong and consistent over time. There was almost no association between the property wealth and tax rates of districts. While there was a small, negative relationship between the per pupil revenue of districts and their tax rates in 1984-85, that relationship became very slightly positive in 1985-86.

The size of districts had little impact on Wyoming's school finance system. In both years, smaller districts tended to have higher per pupil property wealth, higher per pupil revenues, and lower tax rates but the relationships were relatively weak.

The one year change in property wealth among Wyoming's school districts was substantial. Approximately 20 percent of all pupils were enrolled in districts that lost 19.2 percent of their property value while another 20 percent of the pupils attended districts in which the property value increased by an average of 16.0 percent. Most of the remaining pupils were enrolled in districts that apparently had decreases in property wealth. Given the distribution of average property wealth in 1985-86 among the quintiles and the percentage change between 1984-85 and 1985-86, it appears that there was no relationship between changes in property wealth and absolute property wealth. Districts in which property wealth increased seem to have been the poorest in 1984-85. However, some of the wealthiest districts faced large decreases in property wealth while others experienced small losses.

Changes in enrollment were very small, far smaller than changes in per pupil wealth, but opposite in direction to changes in per pupil wealth. In fact, there was a slightly negative correlation (r = -.17) between the percentage change in enrollment and the percentage change in per pupil wealth for school districts in Wyoming. The conclusion is that changes in per pupil wealth were not caused by changes in enrollment but by actual changes in the value of property. No relationship between the enrollment level of districts and change in property wealth was apparent.

Changes in property wealth appear to have had little impact on the per pupil revenue of school districts in Wyoming. Districts with the largest decreases in property wealth had more revenues than districts that had increases in property wealth and both above and below those of districts with smaller decreases in property wealth. Overall, there was a very small, positive relationship (r = .09) between changes in wealth and changes in revenue.

The tax rates of school districts in Wyoming were affected somewhat by changes in property wealth. The average tax rates of districts in which property wealth declined increased more rapidly than they did in districts in which property wealth grew. Although tax rates were generally similar across wealth change quintiles, they tended to be lower in districts that had increases in property wealth. The correlation between changes in property wealth and changes in tax rates was very low (r = -.03).

On the whole, Wyoming's school finance system appears to be weakening Although the level of adequacy is so good and the disparity in tax rates so low, further proposals and changes to alleviate revenue disparity are precluded. However, it does not appear changes in property wealth have caused any deterioration in the system nor do small districts appear to be in jeopardy.

DESCRIPTION AND STATUS OF DATASETS

INTRODUCTION

This section describes the datasets which have been organized as part of this project and discusses some of the limitations and gaps in the available data. Also reviewed are plans to engage state representatives in a review and further development of this information. The national county SAS datasets which have been created will be maintained and developed. Further documentation and access information are available from OSEDA.

TYPES OF DATASETS

Several datasets with different units of analysis and different types of items have emerged from this effort. Generally, they can be described in three broad areas: characteristics of schools, the characteristics of students and the characteristics of the environments in which schools operate. Together with the impact of state educational policies, these characteristics produce a combined effect on the nature of rural education.

Characteristics of schools

The characteristics of each public school and public school district in the McREL region were extracted from The Common Core of Data for Public Schools and for Public Educational Agencies for 1986-87 and 1987-88. A national database was built at the county level linking the school level and district level files. This data was summarized at the county level based on district location information. Among the items in this database are number and size of districts, number of schools, classroom teacher FTE, student enrollment, and high school completion data.

Characteristics of students

Although we have included in the school level datasets student related information such as drop-out rates, eligibility for school lunch programs, and number of AFDC students, we have not developed systematic access to student information such as test scores. The prospects for building disaggregated student level datasets as part of this project may be remote. On the other hand, as more states move toward outcome indicators, some appropriately designed method for assessing disaggregated (district or county level) student characteristics may become more necessary.

The Social and Economic Environment

We have established a SES database of over 600 variables about the social and economic status of counties in the United States. County is the most basic ecological unit appropriate for the analysis of schools for which relatively current data are regularly available. Items have been selected from numerous secondary sources including U.S. Census products, the Bureau of Economic Analysis, the Economic Research Service, marketing publications, and others. Many of the items are time series indicators such as employment and income levels by industry.

Items included in the dataset were selected to be informative about the following major areas which we think are important environmental factors for schools:

Economic sector dependence. While most urban areas have diversified local economies, most rural communities tend to be dependent on a single or a relatively few economic sectors. Consequently, economic fluctuations in a single sector can have profound impacts on local communities and their ability to support education with local resources. Thus, we have included BEA annual employment and income estimates by industrial categories. We have also included county classification frameworks devised to typify the nature of a county's local economic base.

Population and population density. Naturally, we have included numerous population indicators. Rural schools in the region vary widely according to the density of the population served. Issues such as consolidation and distance learning technology correspond to the sparseness of human settlement and how it has changed. Thus, among other things, we have included population densities since 1960. We also included the actual number of square miles in each county.

Nearness to large labor markets and major cities. The economic and cultural impacts of major cities often extend more than an hour by car from the city. Frequently, quite rural looking places are included in metropolitan areas. The fringes of our major cities have been among the most popular and fastest growing areas in our country. Expectations about schools are sometimes different in isolated, fringe and city environs. Thus, we have include several county classifications based upon proximity to centrals cities and such things as interstate highways.

Population change and age distribution. Population change in rural communities is interrelated with changes in the nature of economic activity. A majority of rural counties in the McREL region have lost population since 1980 largely because of the farm crisis and declines in the energy industry. Other counties have grown rapidly. Often these are in the metropolitan fringe or are active retirement areas. The age distribution of the population is also likely to be an influential factor in the socio-economic environment of schools. Thus, we have included in the database components of population change such as births, deaths and net migration estimates. Also, included are age cohort data from 1980 and some population projections.

Income of the population. The resource base of the community is clearly related to its ability to support public services, including education. Thus, many types of income indicators are items in this database. These include income by sector, per capita and median household income. In addition items such as the amount of county income derived from transfer payments is included. An important factor related to educational attainment is the extent of poverty in an area. Therefore, several measures of poverty status have been included.

Education-Finance

The finance analysis is designed to focus on two topics of concern to state policy makers: the equity and adequacy of support for the public schools. In terms of equity, the analysis focuses on statewide disparities in wealth, revenue, and tax rates, relationships among these variables, and how such disparities and relationships are changing over time. Disparities or variations, especially when fairly large or increasing over time, are generally considered to be indicators of inequities unless they are explained by intervening factors such as the size of school districts or their needs.

In order to evaluate disparity, two approaches were used. First, districts were sorted to per pupil wealth, per pupil state and local spending and tax rate. Each sorted group was then divided into quintiles, with approximately 20 percent of the students in each state per quintile. Within each quintile, the weighted average for each variable (tax rate, local spending, etc.) was calculated. This method of analysis is useful for determining the distance of pupils' scores from the statewide mean. It is also useful for determining the extend to which disparity from the mean is changing at the lowest and highest end of the distribution.

Second, the weighted coefficient of variation (the weighted standard deviation of a distribution divided by the weighted mean) is used as a single indication of overall dispersion. Unlike other indicators of disparity, such as the range, the coefficient of variation considers all cases and is normed for comparison over time. A weighted coefficient of variation for per pupil revenue of .200, for example, indicates that approximately two thirds of all pupils are enrolled in districts with spending that is within 20.0 percent of either side of the mean. If the mean were $3,000 per pupil, then two thirds of all pupils would be in districts with spending between $2,400 and $3,600 per pupil. The larger the coefficient of variation, the greater the variation around the mean and the wider the disparity. The coefficient of variation has a minimum of zero and no maximum value.

The analysis examines relationships among variables through the use of correlational analysis. In some cases, dispersion may be considered acceptable if there is a relationship between the variation found in one variable and that found in another. For example, it may be that the variation in per pupil revenue is equitable if it is strongly related to the variation in district tax rates. School finance litigation has generally concluded that a strong relationship between the variation in per pupil revenue and the variation in the per pupil property wealth of districts is inequitable. It is of great interest to know how such relationships are changing over time, particularly in conjunction with changes in disparity. Correlation coefficients range from -1.00 to +1.00. A correlation of 0.00 means that there is no relationship between two variables while a correlation of 1.00 indicates that as the value of one variable increases, so does the value of the other variable and a correlation of -1.00 indicates that as the value of one variable increases, the value of the other decreases.

The adequacy of a state's school finance system is a more difficult issue to evaluate. Comparative analysis at several levels are used to study adequacy. First, information about adequacy flows from the analysis of equity. Some districts simply spend less than others. To the extent that spending

differences do not occur by choice, to the extent that they are related to an inappropriate factor such as wealth, such differences suggest a level of inadequacy, at least relative to high spending districts. Second, adequacy can be measured by changes over time. In this report, rates of growth in per pupil expenditures for districts with low expenditures or high expenditures are compared. Third, adequacy can be assessed to some extent by interstate comparisons. While all data are not expected to be comparable across all seven states, it will be possible to make some rough comparisons in revenue levels.

State Database Development

In addition to the national and regional information compiled as part of this project, a more detailed assessment of a particular state database system was undertaken. In Missouri, files containing data about public school teachers and their assignments was integrated with other files containing financial and outcome indicator data into a multi-level database system. As part of a new Missouri School Improvement Program this information has been used effectively during pilot tests of the program which involves comprehensive team reviews of Missouri school districts. Additional development of these systems is currently underway in Missouri.

LIMITATIONS OF THE DATA

Some of the information included is dated. Later this fall information from the 1987 Census of Local Government will become available. In the spring of next year the 1990 Census will be taken, and the following year the most extensive set of statistical information on our population and its social and economic characteristics will become available. In the meantime, several indicators that are quite dated are necessarily incorporated into this report. For example, information regarding the distributions of types of families and households by county is currently available only from the 1980 Census.

Some information is unavailable or inconsistent. Each state gathers and reports somewhat differing information about its schools and students. Not surprisingly there are inconsistencies in the availability of such information. For example, in the Common Core of Data for Public Schools, Missouri does not report enrollment by race, Wyoming does not report classroom teacher FTE and others do not report free lunch eligibility.

The use of county level data is sometimes problematic. For example, western counties are generally much larger than eastern counties. County based metropolitan and non-metropolitan designations can be very misleading. Often there is as much variation in the social and economic characteristics among counties in the same metropolitan area as there is between metropolitan areas and nonmetropolitan areas. Also, school district boundaries do not coincide with county boundaries and the application of county indicators based on the district location is at best a rough approximation of circumstances in the district.

MAINTENANCE AND FURTHER DEVELOPMENT

More direct interaction with the state agency producers and users of these types of information is necessary. The value of information depends largely on its perceived usefulness. Users need an opportunity to react to information and suggest ways in which modifications could enhance it. Thus, the highest priority for further development should be a meeting where state education agency staff could discuss at some length the important questions they have for which information from these types of datasets could be helpful. From such a meeting further database development priorities would emerge.

These datasets have been constructed in order to help analyze the status of rural education in the McREL region and support school improvement efforts. There are several applications which are yet to be completed.

Of particular interest is the interrelationship between the characteristics of students, the student's schools and the social and economic environment within which they are embedded. An objective of this analysis is the development of a geographically and locally meaningful classification of communities at the county level. There is so much diversity across rural America, even in the McREL region, that conclusions about school improvement efforts need to be grounded in an appreciation of such differences to be credible locally where action is often most influential.

These datasets can be used to take a closer look at the interrelationships between rural poverty and the quality of rural education. Recently, the Secretary of Education released a report on student test scores by state which received wide media attention. When we standardized the state test scores for comparison and ran a few regressions, we discovered that over 60% of the variance in state test scores can be explained by the percent of a state's children who are in poverty. This is hardly a new finding, but it deserves more exploration, particularly in rural areas.

Finally, as we have demonstrated with the development of the Missouri School Improvement Program, credible information makes a difference. But to achieve credibility for state and local school improvement efforts, information must be more than simply accurate. Source credibility is more than the perception of technical expertise. It also hinges on the perception of trustworthiness. Trustworthiness is born of participation in the development of the information and how it is used.

Therefore, we look forward to the opportunity to meet with state education agency staff during the next year. At these meetings examples of the kinds of information systems that can be generated from these datasets will be presented in the context of the Missouri School Improvement Program. Strategies for uses of local demographic analysis to engage local leaders in the quest for school improvement will be explored, especially with the use of computer graphics based on these datasets. Further, we are prepared to extend access to these datasets to any of the state agencies. Indeed, we would welcome the opportunity to work closely with them on information applications that help meet their particular needs and would, therefore, enhance the usefulness of the infrastructure we have thus far created.

List of Maps

Appendix 1

Percent Change in Population, 1980-87

Population Per Square Mile, 1980

Percent Population Rural, 1980

Percent of Population Below Poverty, 1979

Percent of Female Heads of Household Below Poverty in 1979

Percent Population 19 Years and Under, 1985

Percent Population 65 Years or Older, 1985

Transfer Payments in 1987 as a Percent of Total Personal Income

Per Capita Income, 1987

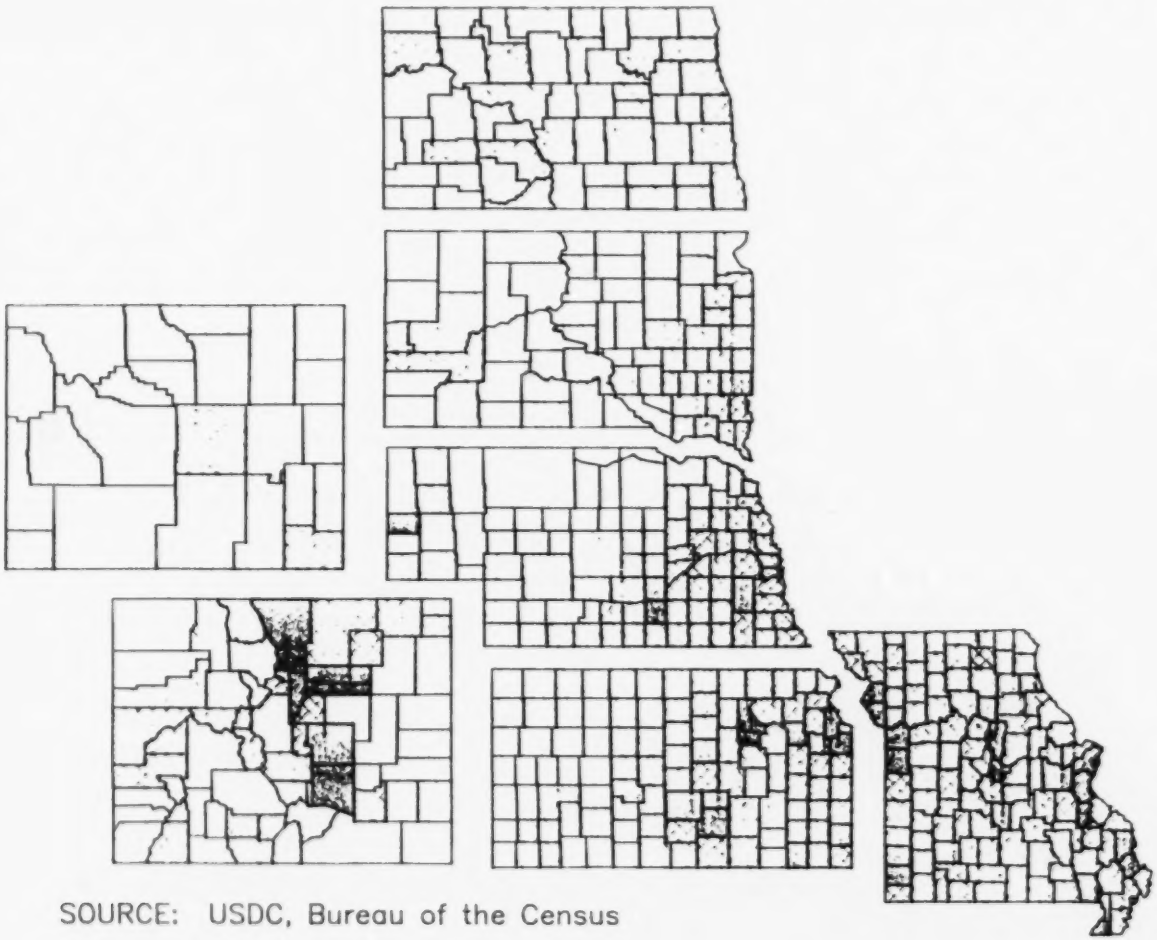
Local Government Expenditures, 1982: Education as a Percent of Total

Student Teacher Ratio, FY87-88

Percent Change in Total Employment, 1980-87

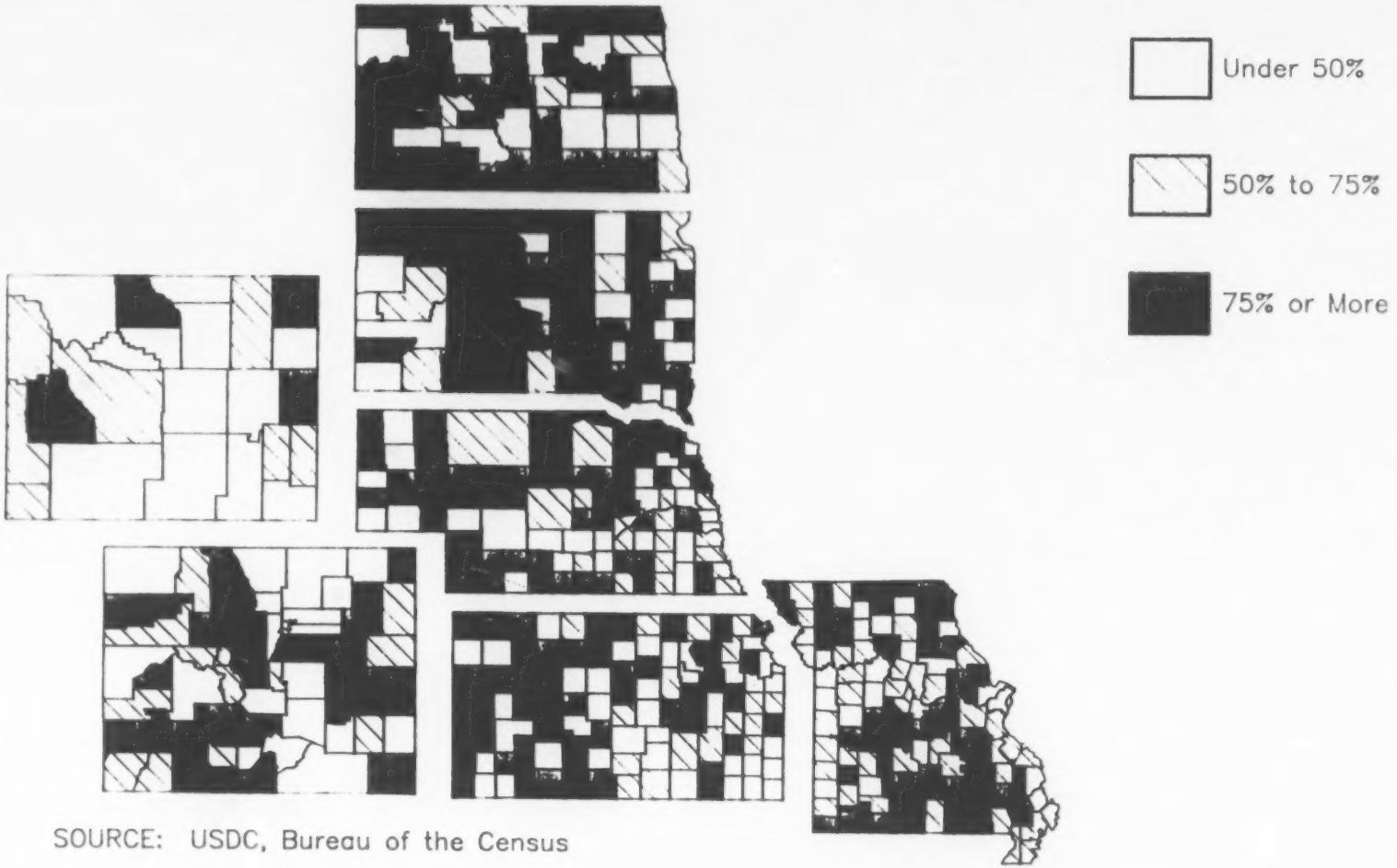
Percent Change in Population, 1980–87

Population per Square Mile, 1980



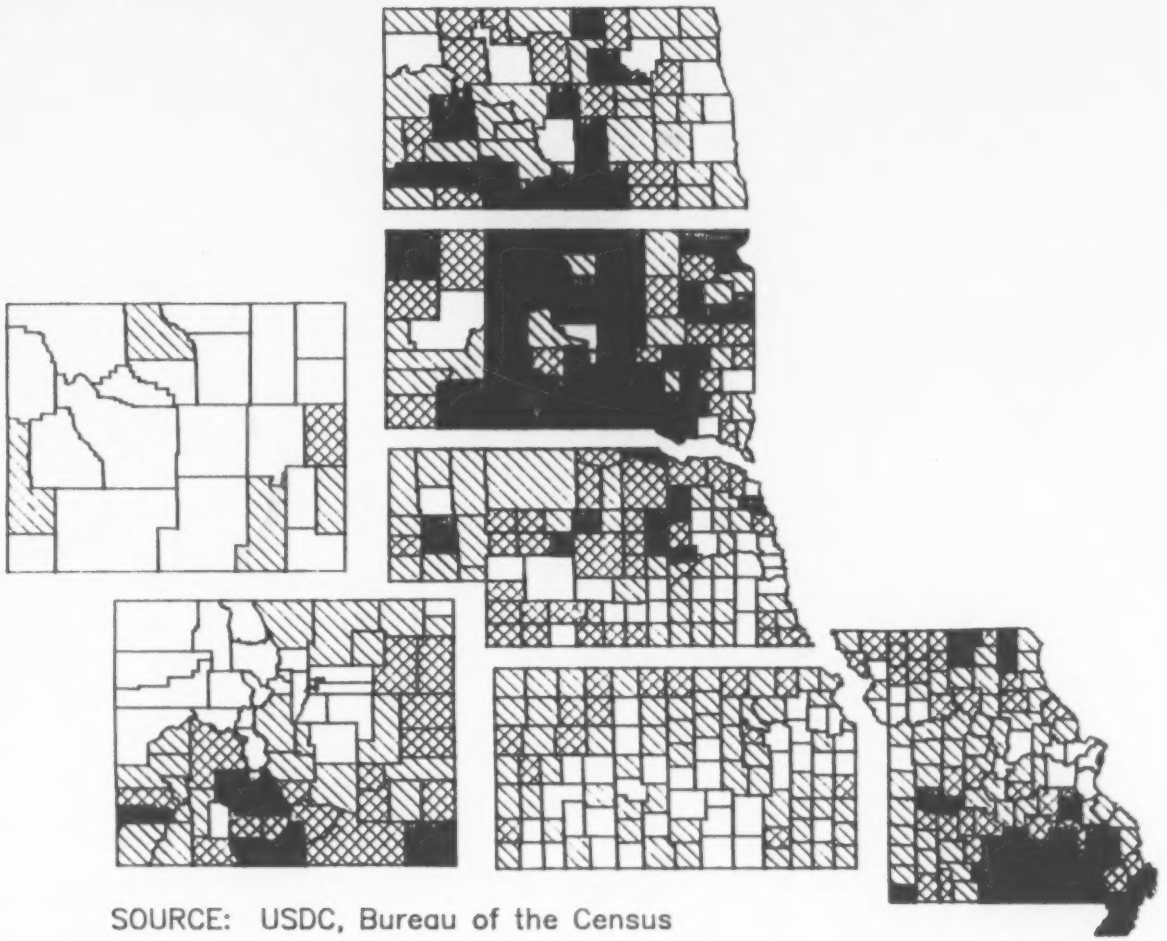
SOURCE: USDC, Bureau of the Census

Percent Population Rural, 1980



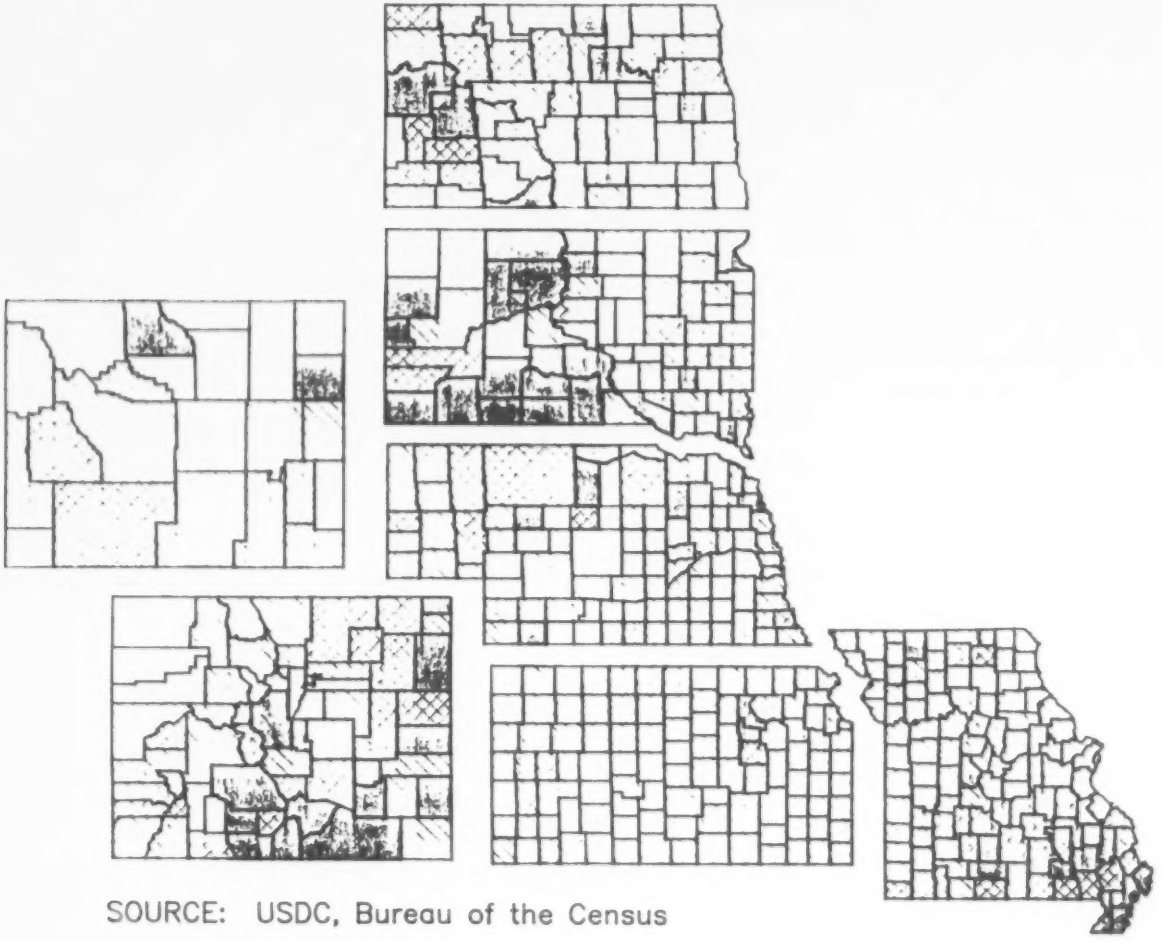
SOURCE: USDC, Bureau of the Census

Percent of Population Below Poverty, 1979



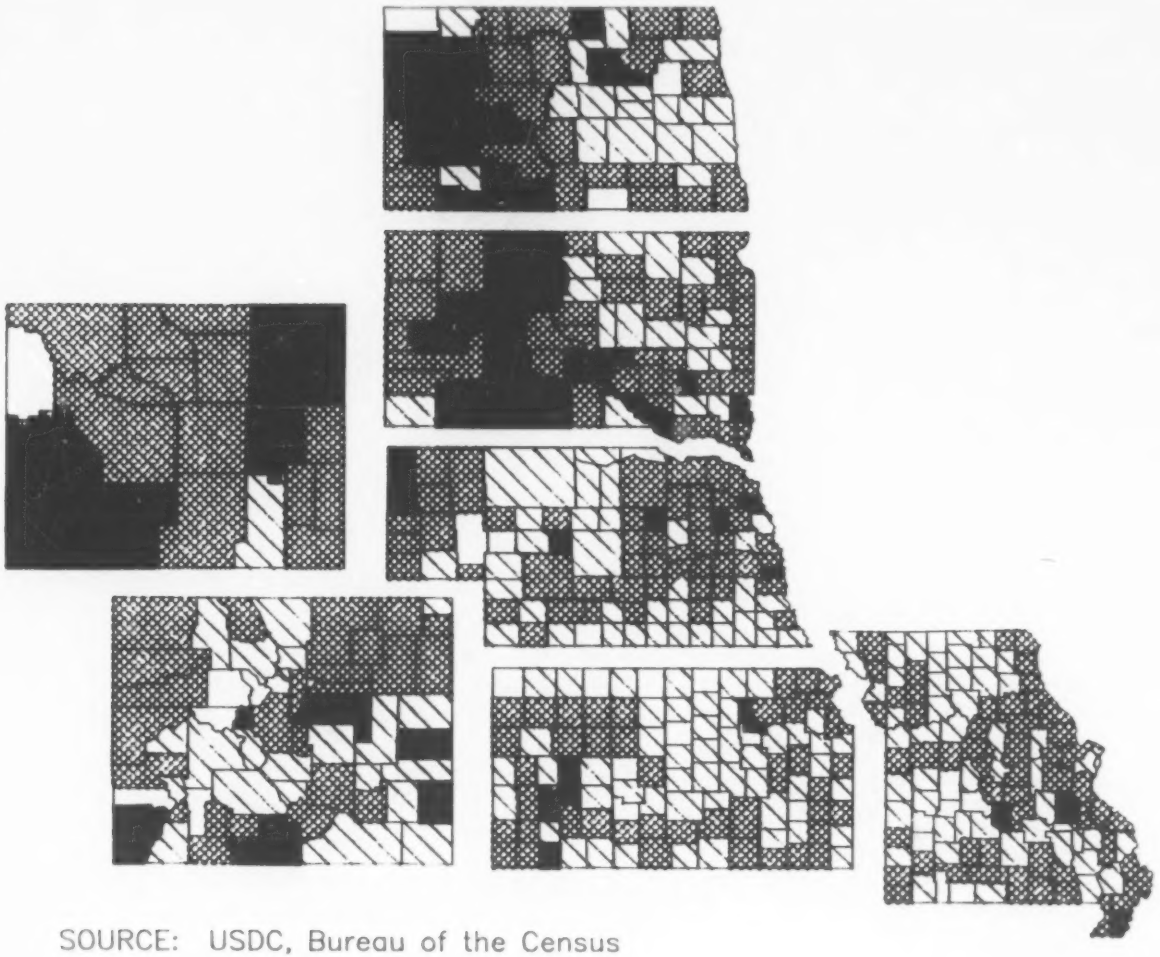
SOURCE: USDC, Bureau of the Census

Percent of Female Heads of Household
Below Poverty in 1979



SOURCE: USDC, Bureau of the Census

Percent Population 19 Years and Under, 1985

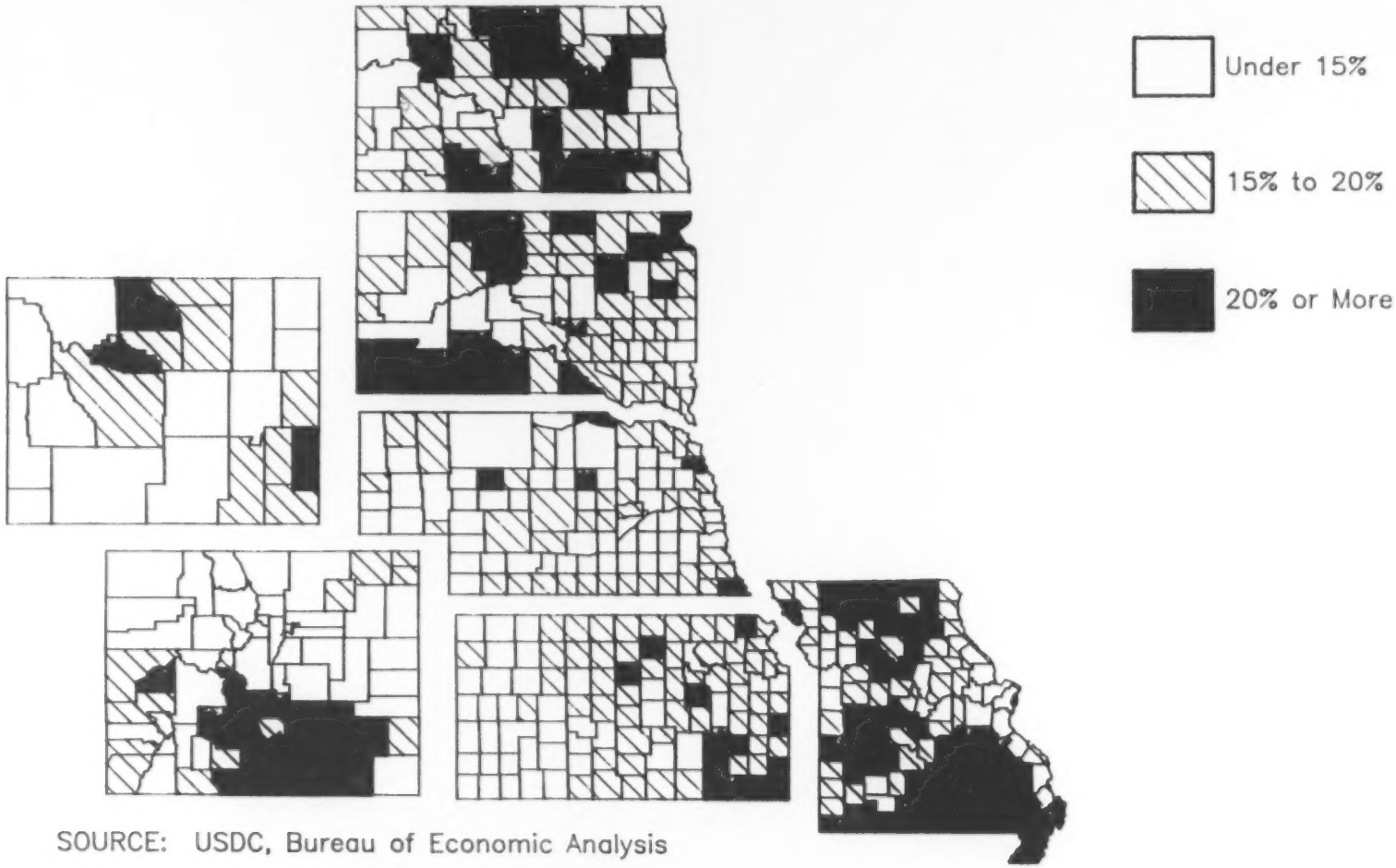


SOURCE: USDC, Bureau of the Census

Percent Population 65 Years or Older, 1985

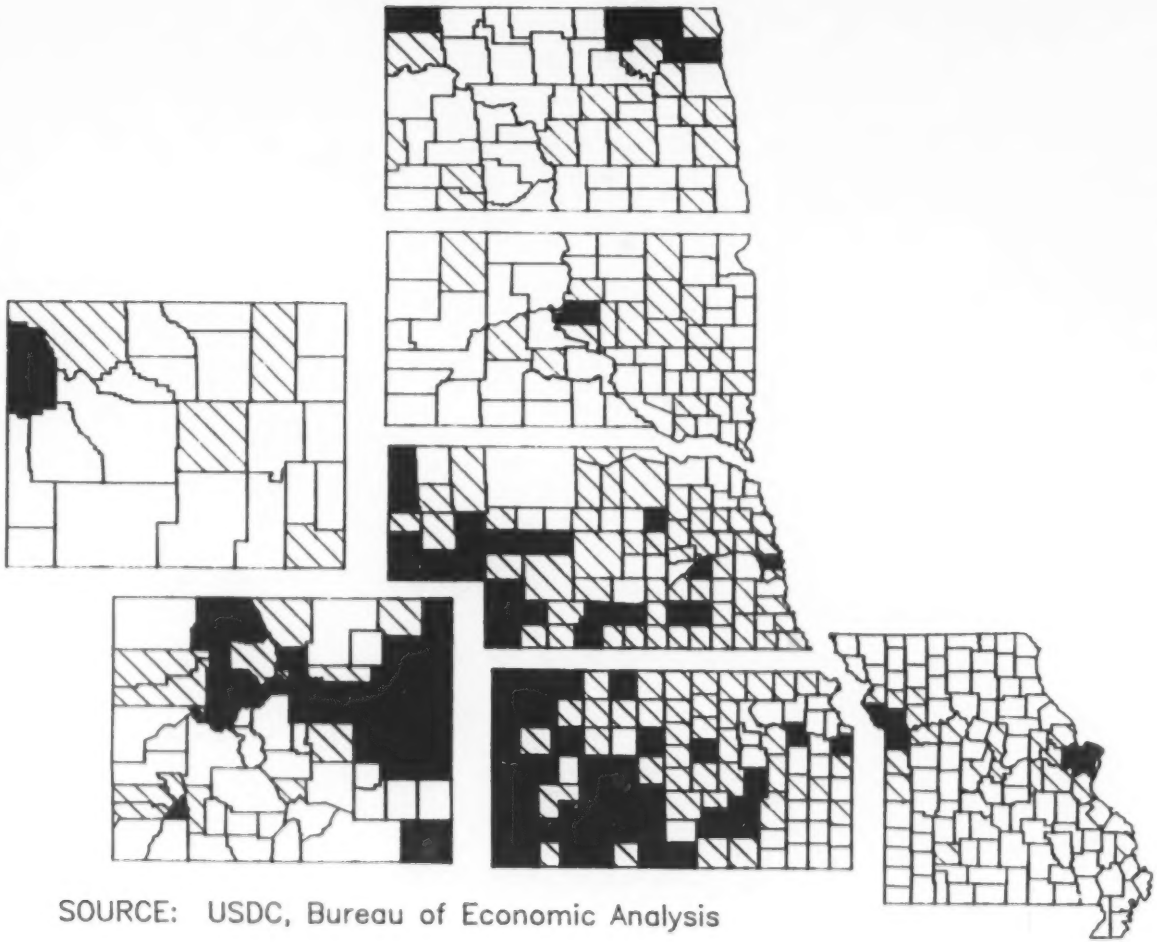
SOURCE: USDC, Bureau of the Census

Transfer Payments in 1987
as a Percent of Total Personal Income



SOURCE: USDC, Bureau of Economic Analysis

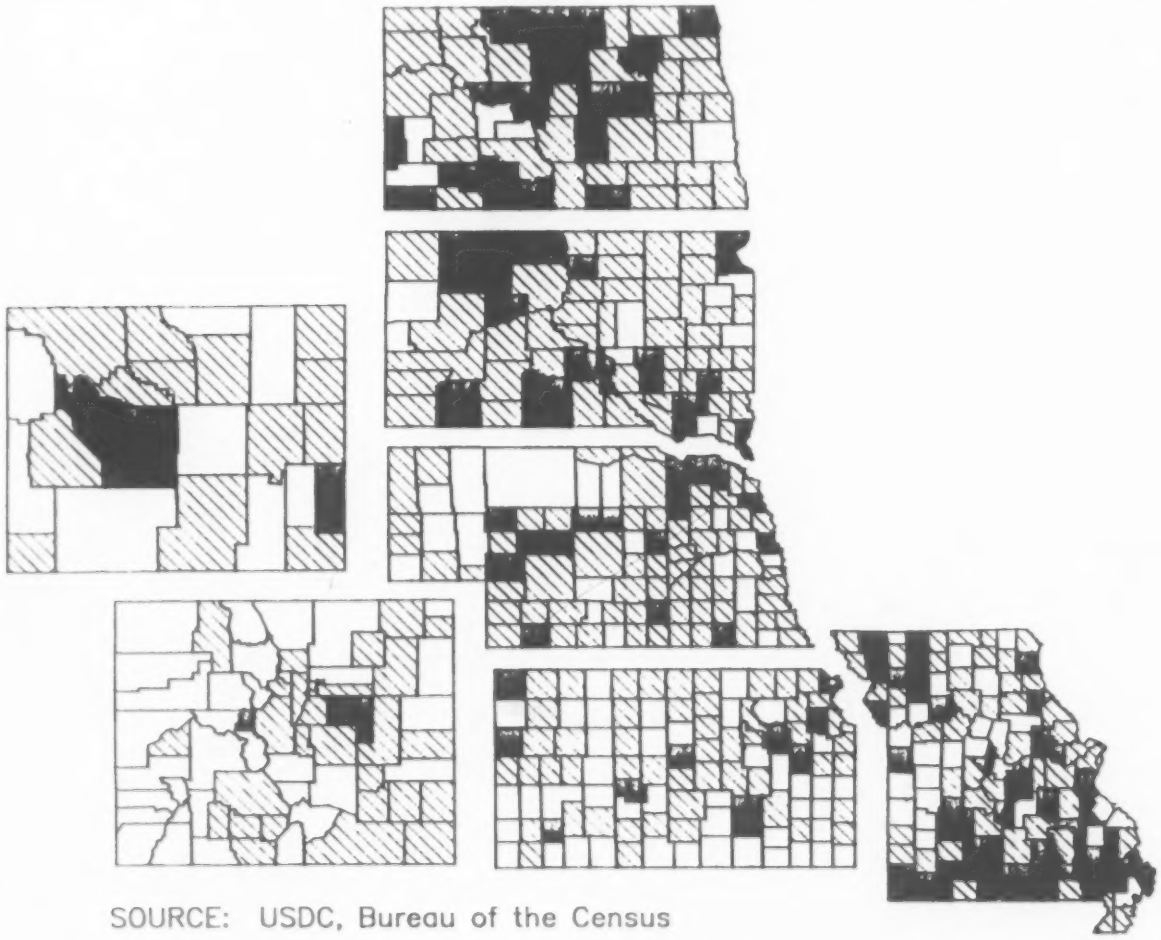
Per Capita Income, 1987



SOURCE: USDC, Bureau of Economic Analysis

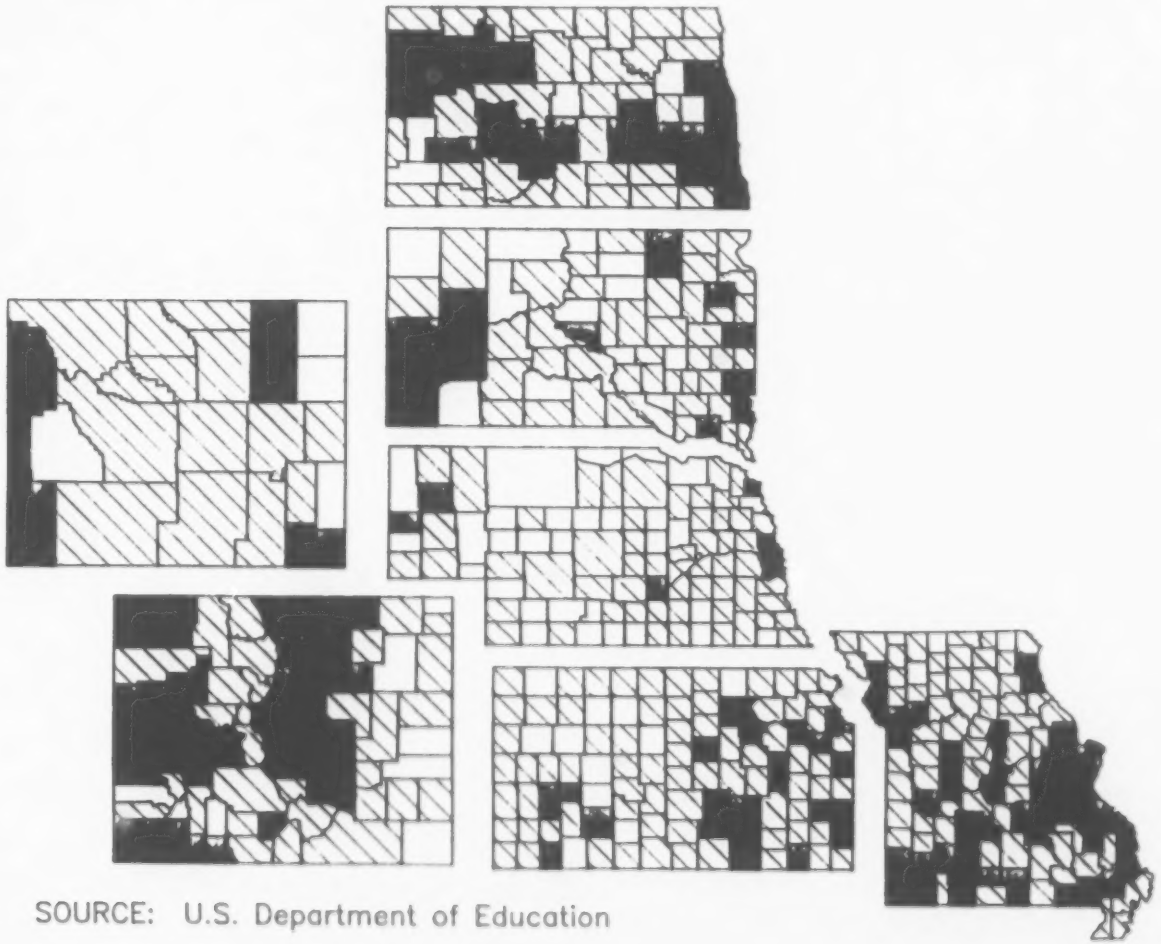
Local Government Expenditures, 1982

Education as a Percent of Total



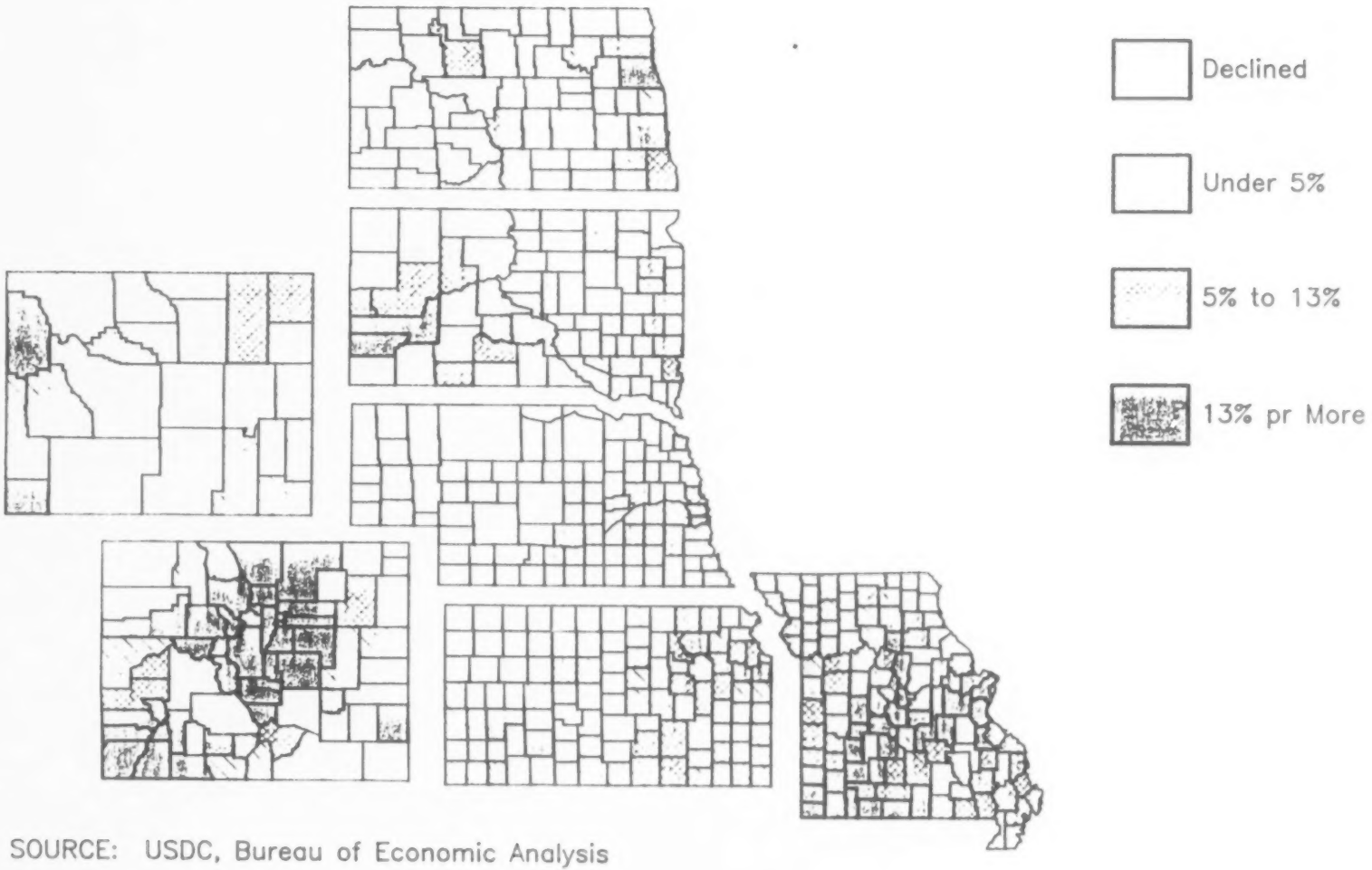
SOURCE: USDC, Bureau of the Census

Student/Teacher Ratio, FY1987–88



SOURCE: U.S. Department of Education

Percent Change in Total Employment, 1980–87



SOURCE: USDC, Bureau of Economic Analysis